A-4474

COUNTY BOROUGH OF SOUTH SHIELDS.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1933.

W. CAMPBELL LYONS,
M.B., Ch.B., D.P.H.

65202

SCHOOL OF HYGIENE
LIBRARY
12 JAN

COUNTY BOROUGH OF SOUTH SHIELDS.

ANNUAL REPORT OF THE
MEDICAL OFFICER OF HEALTH
FOR THE YEAR 1933.

W. CAMPBELL LYONS,
M.B., Ch.B., D.P.H.

CONTENTS.

	PAGE.
Chairmen of Committees	3
Staff of Public Health Department, and Poor Law Medical Staff	3
Preface	6
Statistics and Social Conditions	8
Vital Statistics	11
General Provision of Health Services	31
Sanitary Circumstances of the Borough	32
Housing Conditions in the Borough	44
Inspection and Supervision of Food	49
Notifiable Diseases	61
Certain Non-notifiable Diseases	66
Isolation Hospitals	67
Municipal Laboratory	70
Tuberculosis	71
Venereal Diseases	90
Maternity and Child Welfare	95
Meteorology	110

CHAIRMEN OF COMMITTEES.

Health Committee—Councillor Weston.

Hospital and Sanatorium Sub-Committee—Alderman Druery, J.P.

Venereal Diseases Sub-Committee—Alderman Sadler.

Slaughterhouses Sub-Committee—Alderman Richardson, M.B.E., J.P

Maternity and Child Welfare Committee—Alderman Druery, J.P.

Education Committee—Alderman Ranson, J.P.

School Medical Service Sub-Committee—Alderman Sadler.

Housing and Town Planning Committee—Alderman Dunlop.

Town Improvement Committee—Councillor J. W. Wood.

Public Assistance Committee—Councillor Chapman, B.A., C.M.G., D.S.O., D.L., M.P., J.P.

STAFF OF PUBLIC HEALTH DEPARTMENT.

Post or Appointment.	Name.	Qualifications.
*Medical Officer of Health, Chief Tuberculosis Officer, Principal School Medical Officer, Bacteriologist, etc.	W. Campbell Lyons	M.B., Ch.B., D.P.H.
Clinical Medical Officer, Venereal Diseases	D. J. Mackinnon	M.B., Ch.B.
Tuberculosis Officer; and Medical Officer, Cleadon Park Sanatorium	E. T. D. Gaspey	M.D., M.R.C.S., L.R.C.P.
Assistant Medical Officer, Maternity and Child Welfare	Dorothy O. S. Blair	M.B., B.S.
Assistant School Medical Officers	H. Levy	M.B., B.S.
	Nora A. Stack (Resigned 1/8/33)	B.A., M.B., B.Ch., D.P.H.
	Margaret C. P. Hamilton (Commenced 6/11/33)	M.B., Ch.B., D.P.H.
Operating Surgeon, (Nose and Throat, School Medical Service)	R. Crosby†	M.B., B.S., M.R.C.S.
Consultant Ophthalmologist	T. Gowans†	M.B., Ch.B.
School Dental Surgeons	F. Innes	L.D.S.
	J. L. Reid†	L.D.S.
Public Vaccinators	G. P. McNabb†	M.B., B.S.
	T. W. Carstairs†	M.B., Ch.B.
	A. de Redder† (Appointed 15/6/33)	M.B., B.S.
Borough Analysts	J. T. Dunn†	D.Sc., F.I.C.
	H. C. L. Bloxam†	F.I.C.

* Also Medical Officer to North East Durham Joint Smallpox Hospital Board.

† Part-time Officials, also in private practice.

Staff of Public Health Department.—*Continued.*

Post or Appointment.	Name.	Qualifications.
Veterinary Surgeon..........	J. J. McDowall†	M.R.C.V.S.
Food Inspector, etc.	W. Hill	Certificate R.S.I. and Meat Inspector's Certificate.
District Sanitary & Housing Inspectors, etc.	R. W. Weir	Certificate R.S.I.
	R. Ayre............	Do.
	W. Smith	Do.
	C. Skelton..........	Do.
	J. McVay	Do.
Inspector under the Shops Acts	T. Tinn	....
Vaccination Officer, etc.	A. T. Lawson	....
Inspector of Midwives	Mrs. M. W. Arthur ..	S.R.N. and C.M.B. Certificate.
Health Visitors, etc.	Miss P. M. Winter ..	S.R.N.
	Miss A. Smyth	S.R.N. and C.M.B. Certificate.
	Miss A. Rothwell....	Do.
	Miss E. J. Smith ..	Do.
	Miss M. Munro......	Do.
	Miss R. Barrell	Do.
	Miss R. Freeman ..	Do.
	Mrs. E. Cowley	Do.
	Miss J. B. Clark	Do.
	Miss M. W. Crofton (Resigned 30/11/33)	S.R.N., C.M.B. Cert. and H.V. Cert.
	(One H.V. post vacant)	
Chief Clerk	J. Yeoman	Certificate R.S.I.
Clerks	C. Hymers	Do. and Meat Insp's. Cert.
	J. Hilton	Certificate R.S.I.
	W. T. Foster	Do.
	W. H. Trotter......	....
	G. F. Kershaw.. ..	....
	W. Johnson	....
	H. S. Wilson	....
	Miss E. Treliving....	....
	Miss E. Park	....
	Miss M. Anderson ..	....
	Miss E. Robertson ..	....
	Miss M. R. Tate	....
Dental Attendant, School Clinic	Miss O. Deakin	....
Matron, Deans Isolation Hospital	Miss M. M. Buchanan	S.R.N.
Matron, Cleadon Park Sanatorium	Miss L. Allison......	S.R.N.
V.D. Clinic Nurse	Miss E. H. Lewthwaite	S.R.N.
V.D. Male Attendant	J. Bentley	....

POOR LAW MEDICAL STAFF.

Post or Appointment.	Name.	Qualifications.
Harton Hospital Medical Officer	A. S. Hannay	M.B., Ch.B.
House Surgeons	P. B. Angus	M.B., Ch.B.
	W. L. Broadfoot	M.B., Ch.B.
Consulting Surgeon	J. Collingwood Stewart†	M.B., M.S., F.R.C.S. (Eng.)
Consulting Physician	W. H. Dickinson†	O.B.E., M.D., D.T.M. & H., M.R.C.P. (Ed.), D.P.H.
District Medical Officers	H. D. Ord†	M.B., B.S.
	G. P. McNabb†	M.B., B.S.
	T. O'Callaghan†	L.R.C.P., L.R.C.S. (Ed.), L.R.F.P.S. (Glas.)
	A. V. J. Harrison†	M.B., B.Ch., B.A.O.

† Part-time, also in private practice.

To the Chairman and Members of the Health Committee.

I have the honour to present the 59th Annual Report on the health and sanitary conditions of the Borough and the work of my department for the year 1933.

The population as estimated by the Registrar-General at mid-year was 114,100.

The birth-rate declined from 19.0 per 1,000 of the population in 1932 to 17.2 per 1,000 in 1933. This represents the lowest birth-rate recorded for the Borough.

The death rate which was 13.7 per 1,000 of the population showed a slight increase on that of the previous year when it was 13.4 per 1,000. The infant mortality rate increased to 93 per 1,000 births as compared with 70 per 1,000 births in 1932. The increase is due to a larger number of deaths among infants from respiratory diseases and enteritis, the latter being no doubt due to the warm summer.

The maternal mortality was 5.35 per 1,000 total births ; in other words, one mother lost her life out of every 187 births. While the incidence of puerperal fever is lower in South Shields than in the country generally the death rate from it is higher.

With regard to tuberculosis, there has been a considerable decrease in the number of cases of the non-pulmonary forms of the disease : that is, tuberculosis of glands, bones, joints, etc.—the conditions which are usually associated with the bacillus of bovine tuberculosis. At the same time there has been a slight increase in the number of cases of tuberculosis of the lungs. This is accounted for by the fact that a much larger number of contacts, or those living in the same house as a patient, have been examined. No less than 15 per cent. of those examined have been found to be tuberculous. These cases, some of them in an early stage of the disease, would not have, in the ordinary way, been discovered for some considerable time, and in the meantime they would no doubt have been a factor in the spread of the disease to others. The number of deaths from tuberculosis fell from 14.3 per cent. of the total deaths in 1932 to 13.5 per cent. in 1933. I have made some comment on the progress of the Council's tuberculosis scheme in the section of the report dealing with tuberculosis, page 71.

There was a further increase in the number of deaths from cancer, 165 deaths having been registered as due to that disease as compared with 148 in 1932.

In common with other parts of the country, the Council have embarked upon a scheme of slum clearance. Following the receipt of the Ministry of Health's Circular No. 1331 of 6th April, 1933, a definite and intensive programme was formulated with the object of removing the unfit houses and replacing them by new. For that purpose a comprehensive survey of the whole Borough has been carried out and a schedule was drawn up showing that some 2,000 unfit dwellings accommodating over 8,000 persons would be dealt with during the next three years.

Another problem in connection with housing which is causing no little anxiety is the sublet house. I have drawn attention to the subject on page 34 of this Report. Unfortunately, the Byelaws regarding Houses-let-in-lodgings do not go far enough. The owners of such property are required under the Byelaws, to provide certain amenities—a small matter in consideration of the high rents charged—but this hardly meets the situation. I do not think the system can be mitigated until the owner of a house originally intended for one family, is compelled to submit plans for its conversion into tenements, before he is allowed to sublet it to a number of families.

The work of the various clinics tends to increase, and in spite of the recent alterations the accommodation is at times severely taxed.

I have again to place on record my appreciation of the work of my staff and my thanks to the members of the Council for their interest in the work of my department.

W. CAMPBELL LYONS,
MEDICAL OFFICER OF HEALTH.

TOWN HALL,
SOUTH SHIELDS.

STATISTICS AND SOCIAL CONDITIONS OF THE BOROUGH.

Area of Borough (including inland water but excluding foreshore and tidal water)	3,183 acres.
Population at Census 1931	113,455
Resident population, mid-year 1933 (Registrar-General's estimate)	114,100
Number of inhabited houses at end of 1933 (according to Rate Books)	28,802
Rateable Value at 1st April, 1933	£483,368
Produce of a penny rate (estimate for year 1933-34)	£1,872

Social Conditions.

The principal industries are shipbuilding, ship-repairing, coal-mining and export. Except for those employed in a local biscuit factory and at a dye works there is very little industrial employment of women in the Borough.

UNEMPLOYMENT.

I am indebted to Mr. A. Bower, Manager of the Employment Exchange, for information relating to unemployment, which I have summarised below.

The average numbers on the live register, taken from the monthly returns, were as follows :—

Men	11,945
Young men	811
Boys	579
Women	449
Young women	248
Girls	358
	14,390

This total represents 45 per cent. of the insured population. Of the different groups the percentage of unemployed was as follows :—

Men	50 per cent.
Young men	33 ,,
Boys	42 ,,
Women	18 ,,
Young women	22 ,,
Girls	56 ,,

The maximum and minimum numbers of persons unemployed during the year were :—

	Maximum.	*Minimum.*
Men	12,336	11,512
Young men ..	910	702
Boys	634	533
Women	520	401
Young women ..	297	195
Girls	428	258

HEALTH INSURANCE.

The Clerk to the South Shields Health Insurance Committee informs me that the number of insured persons in the Borough on the 1st January, 1934, was 42,008, as compared with 42,684 a year previously.

The number of prescriptions dispensed during 1933 was 227,639 at a cost of £7,281, as compared with 234,606 during1932, at a cost of £7,401.

POOR LAW RELIEF.

I am informed by the Public Assistance Officer that the number of persons on relief was as follows :—

OUT-RELIEF CASES.		*Ordinary.*	*Unemployed.*
1. Average weekly number of " cases " chargeable during the year ended 31st December, 1933		1,591	126
2. Total cost of relief for same period		£41,051	£3,669
3. Number of persons who received out-door relief during above period	Men	1,163	950
	Women ..	2,343	684
	Children ..	2,428	1,297
4. Number of persons included in No. 1 above who also received out-door medical relief	Men	190	28
	Women ..	335	35
	Children ..	119	49
5. Number of persons who received out-door medical relief only.	Men	22	46
	Women ..	156	214
	Children ..	30	311

IN-DOOR RELIEF.

6. Number of persons chargeable to the County Borough in Harton Institution on 1st January, 1934 609

Extracts from Vital Statistics.

	Total.	*Male.*	*Female.*		
Live Births —				Birth rate per 1,000 of the estimated resident population	17.2
Legitimate ..	1,874	979	895		
Illegitimate ..	89	41	48		
Still Births	92	50	42	Rate per 1,000 total births (live and still-births)	45
Deaths	1,558	823	735	Death rate per 1,000 of the estimated resident population	13.7

	Deaths.	Rate per 1,000 total births.
Deaths from puerperal causes :—		
Puerperal sepsis	3	1.46
Other puerperal causes	8	3.89
Total	11	
Death rate of infants under one year of age :		
All infants per 1,000 live births..........	93	
Legitimate infants per 1,000 legitimate live births............................	93	
Illegitimate infants per 1,000 illegitimate live births..........................	79	
Deaths from Measles (all ages)	35	
,, Whooping cough (all ages)......	15	
,, Diarrhoea (under 2 years of age)	28	

VITAL STATISTICS.

Population.

The population of the Borough at the 1931 Census was 113,455.

The Registrar-General's estimate of the resident population at mid-year 1933 was 114,100.

Births.

During 1933 there were 1,963 births, compared with 2,168 in 1932, the birth rate being 17.2 per 1,000 of the population. In this figure are included the births of 37 children of South Shields parents who were born elsewhere, but not those of 35 children born in South Shields whose parents belong to other areas. Of the total births 1,020 were males and 943 females.

There were 89 births of illegitimate infants (41 males and 48 females) or 4.5 per cent. of the total births.

The birth-rate for the Borough as compared with that of the country generally is as follows :—

England and Wales	14.4
118 County Boroughs and Great Towns	14.4
132 Smaller Towns	14.5
London	13.2
South Shields	17.2

The annual birth-rates for the Borough since 1871 are shown on page 30. The number of births reported to the Health Department under the Notification of Births Act is referred to on page 95, and the number in each ward is given on page 109.

Still-Births.

The number of still-births registered during 1933 has been supplied by the Registrar-General and is published at the request of the Ministry of Health.

	Still-births Registered.		*Inward Transfers.*		*Outward Transfers.*		*Still-births allocated to South Shields.*	
	M.	F.	M.	F.	M.	F.	M.	F.
Total : Legitimate and Illegitimate	53	47	..	..	3	5	50	42
Illegitimate	1	1	..	..	..	..	1	1

The following table compares the number of still-births in South Shields with the country generally.

	Per 1,000 *of the population.*
England and Wales	0.62
118 County Boroughs and Great Towns ..	0.67
132 Smaller Towns	0.63
London	0.45
South Shields	0.81

There were 45 still-births in South Shields per 1,000 total births as compared with 41 per 1,000 in England and Wales.

Deaths.

During 1933, 1,558 deaths occurred among residents of South Shields ; this is equivalent to an annual death-rate of 13.7 per 1,000 of the population as compared with 13.4 per 1,000 in 1932, and 15.6 per 1,000 in 1931. Included in the number of deaths are those of 64 residents of the Borough who died elsewhere, but 185 residents of other areas who died in South Shields are excluded.

The death-rate for South Shields as compared with that for the country generally is as follows :—

England and Wales	12.3
118 County Boroughs and Great Towns	12.2
132 Smaller Towns	11.0
London	12.2
South Shields	13.7

The general death-rate in the first quarter of the year was 16.9, in the second 13.1, in the third 12.0, and in the fourth 12.7 per 1,000 of the population.

Of the total deaths 823 were among males and 735 among females.

The chief causes of death were as follows :—

	No. of deaths.	*Percentage of total.*
Heart diseases	250	16.0
Tuberculosis	210	13.5
Cancer	165	10.6
Pneumonia	84	5.4
Bronchitis	93	6.0
Arterio-sclerosis	69	4.4
Cerebral haemorrhage and apoplexy	66	4.2
Nephritis	54	3.5
Violence and accidents	46	3.0
Influenza	50	3.2
Prematurity and diseases of early infancy	76	4.9

74 per cent. of the deaths from heart disease occurred in persons over 60 years of age.

The age at death is summarised as follows :—

	No. of deaths.	*Percentage of total.*
Under 1 year	182	11.7
1—4 years	108	6.9
5—14 ,,	71	4.6
15—24 ,,	101	6.5
25—34 ,,	87	5.6
35—44 ,,	114	7.3
45—59 ,,	249	16.0
Over 60 ,,	646	41.4

Of the 108 deaths in the age-group 1—4 years, respiratory diseases caused 40 deaths, measles 24, and tuberculosis 13.

Coroners' inquests were held in respect of 64 deaths. In two cases the Coroner ordered a post-mortem examination, but it was found unnecessary to hold inquests. There were 61 deaths, including those of 11 children under one year, which were uncertified by a medical practitioner, and on whom no inquest was held.

419 deaths, or 27 per cent. of the total, occurred in institutions, as follows :—

Harton Institution	297*
Ingham Infirmary	62*
Deans Hospital	15*
Private Nursing Homes	1*
Institutions outside the Borough	44

* Exclusive of 163 deaths in Harton Institution, 5 in the Ingham Infirmary, 1 in the Deans Hospital, and 1 in a private nursing home, among non-residents of the Borough.

The 44 deaths in institutions outside the Borough occurred as follows :—

Royal Victoria Infirmary, Newcastle	10
Mental Hospitals	11
Poor Law or Municipal Hospitals	3
Monkwearmouth Hospital	2
Tynemouth Jubilee Infirmary	1
Fleming Memorial Hospital, Newcastle	2
Newcastle Babies' Hospital	3
Private Nursing Homes	5
Other Institutions	7

The causes of death in institutions are set out in table 3, page 28.

In the following table, the South Shields death rates in 1933 are compared with provisional rates for the country generally, the county boroughs and the smaller towns.

	Death-rate per 1,000 population.								Deaths per 1,000 births.	
	All Causes	Enteric Fever.	Smallpox.	Measles.	Scarlet Fever	Whooping Cough.	Diphtheria.	Influenza	Diarrhoea and Enteritis (under 2 years).	Infant Mortality Rate.
England and Wales..	12.3	0.01	0.00	0.05	0.02	0.05	0.06	0.57	7.1	64
118 County Boroughs and Great Towns	12.2	0.00	0.00	0.06	0.02	0.06	0.08	0.55	9.4	67
132 Smaller Towns ..	11.0	0.00	0.00	0.04	0.02	0.04	0.04	0.53	4.9	56
London	12.2	0.00	0.00	0.02	0.02	0.08	0.08	0.51	11.6	59
South Shields	13.7	..	..	0.31	0.01	0.13	0.04	0.44	14.4	93

The tabulation of deaths as given in Table 1, page 16, follows the Detailed International List of Causes (1920 Revision), and the classification has been done in accordance with the rules contained in the Registrar-General's Manual in connection with that List.

At the request of the Ministry of Health the short list of the causes of death as supplied by the Registrar-General is included in the report (Table 1(A.), page 25) in order that the relation between the local tabulation and the statistics supplied by the Registrar-General may be compared. There is substantial agreement, but as the Registrar-General points out the classification of some deaths in respect of which the certifying medical practitioners have given indefinite causes is modified in the light of further information obtained from them by special enquiries ; and this possible source of discrepancy should be borne in mind.

Ward Death Rates, etc.

The following is a table showing the average annual birth rate, death rate, and natural increase per 1,000 population in each ward in the Borough during the past 10 years :—

Ward.	*Birth Rate.*	*Death Rate.*	*Natural Increase.*
Shields	29.3	19.1	10.2
Holborn	28.6	20.3	8.3
Laygate................	28.3	18.4	9.9
St. Hilda	26.2	17.7	8.5
Rekendyke	24.6	15.4	9.2
Tyne Dock	22.9	13.7	9.2
Deans	21.4	12.6	8.8
Victoria	21.1	13.5	7.6
Simonside	20.2	12.8	7.4
Beacon	19.0	13.2	5.8
Hadrian	18.9	15.0	3.9
Bents	17.3	13.6	3.7
Harton	16.6	9.0	7.6
West Park	15.2	11.9	3.3
Westoe	12.9	11.1	1.8

TABLE 1.—CAUSES OF DEATH during 1933, of Persons belonging to the County Borough of South Shields, classified in accordance with the Registrar-General's Manual of the Detailed International List (1920 Revision) as adapted for use in England and Wales.

(This list has been abridged by omitting headings against which no deaths have been recorded during the year).

CAUSES OF DEATH.	M.	F.	All Ages	AGES AT DEATH.																				
				0–1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70–75	75–80	80 +
I.—EPIDEMIC, ENDEMIC, AND INFECTIOUS DISEASES.																								
5. Malaria	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
7. Measles	21	14	35	6	14	7	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	6	9	15	11	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	3	2	5	..	1	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Influenza—																								
(*a*) with pulmonary complications—																								
1 with pneumonic complications	10	9	19	..	1	1	1	..	..	1	2	2	1	1	..	..	1	3	1	..	..	3	1	..
2 with other pulmonary complications	2	6	8	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	1	..	1	..	1	1
(*b*) without pulmonary complications																								
1 with non-pulmonary complications	5	5	10	1	..	..	..	..	1	..	1	..	1	1	1	1	2	..	..	..	1	..	..	..
2 without stated complications	6	7	13	..	..	..	..	..	2	..	..	1	..	..	1	2	1	1	1	2	..	..	1	1
21. Erysipelas	1	3	4	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..
22. (1) Acute poliomyelitis	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23. Encephalitis lethargica	1	1	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
24. Meningococcal meningitis	2	..	2	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	91	68	159	..	2	1	..	..	6	6	17	32	14	27	18	14	5	6	6	3	1	1	..	..
32. Tuberculosis of the central nervous system	7	10	17	1	..	4	..	..	6	2	2	2	..	..	..	..	..	..	..	..	..	..	..	..

33. Tuberculosis of the intestines and peritoneum	10	6	16	2	4	..	1	..	..	3	1	1	..	2	..	1	..	..	..	..	..	1	..	..
34. Tuberculosis of the vertebral column	2	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
36. Tuberculosis of other organs—																								
(*c*) Lymphatic system (abdominal glands excepted)	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
(*d*) Genito-urinary system	3	1	4	..	..	..	..	..	..	1	..	1	..	..	..	1	1	..	..	..	..	..	..	..
37. Disseminated tuberculosis—																								
(*a*) Acute	1	1	2	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
(*b*) Chronic or unstated	7	2	9	..	1	..	..	..	1	1	2	1	..	..	1	1	..	..	..	1	..	..	..	..
38. Syphilis	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..
41. Purulent infection, Septicaemia	2	1	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..
II.—GENERAL DISEASES NOT INCLUDED IN I.																								
43. Cancer of the buccal cavity	7	1	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	1	2	..	..
44. ,, pharynx, oesphagus, stomach, liver and annexa	26	31	57	..	..	..	..	..	..	..	..	..	..	1	..	2	3	3	13	10	7	7	6	5
45. ,, peritoneum, intestines and rectum	11	29	40	..	..	..	..	..	..	..	..	..	..	..	1	1	1	10	1	5	10	6	4	1
46. ,, female genital organs	..	19	19	..	..	..	..	..	..	..	..	1	..	..	..	2	4	3	2	5	1	1	..	..
47. ,, breast	..	15	15	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	4	2	2	2	..	..
48. ,, skin	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..
49. ,, other or unspecified organs	19	4	23	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	3	6	5	2	3	1
50. Tumours not returned as malignant (brain and female genital organs excepted)	3	2	5	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	..	..	..
51. Rheumatic fever	3	2	5	..	..	..	..	..	1	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..
52. (2) Rheumatoid arthritis, Osteo-arthritis	1	4	5	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	1	..	..	..
56. Rickets	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
57. Diabetes	3	11	14	..	..	..	..	..	..	1	..	..	1	..	1	..	..	1	..	5	2	2	1	..

TABLE 1.—CONTINUED.

CAUSES OF DEATH.	M.	F.	All Ages	Ages at Death. 0–1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70–75	75–80	80 +
58. Anaemia, Chlorosis :																								
(*a*) Pernicious anaemia	1	5	6	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	1	1	..	1	..
(*b*) Other anaemias & chlorosis	1	1	2	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
60. Diseases of the thyroid gland :																								
(*a*) Exophthalmic goitre	..	3	3	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..
(*b*) Other diseases of the thyroid gland																								
(1) Myxoedema	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
62. Diseases of the thymus	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65. (*a*) Leukaemia	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*b*) Lymphadenoma	3	1	4	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..
III.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																								
70. (1) Cerebral abscess	..	2	2	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
71. Meningitis	5	1	6	..	2	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
72. Tabes dorsalis (locomotor ataxy)	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
73. Other diseases of the spinal cord	1	1	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..
74. (*a*) Cerebral haemorrhage :																								
(1) Cerebral haemorrhage so returned	17	25	42	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	6	5	5	12	7	2
(2) Apoplexy (lesion unstated)	8	6	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	2	5	3
(*b*) Cerebral thrombosis and embolism:																								
(1) Cerebral embolism	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
(2) Cerebral thrombosis	4	3	7	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2	2	1
75. (*a*) Hemiplegia	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
(*b*) Other forms of paralysis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
76. General paralysis of the insane	6	..	6	..	..	..	..	..	..	..	..	..	1	..	1	2	..	2	..	..	..	..	..	..
77. Other forms of insanity	1	5	6	..	..	..	..	..	..	..	..	..	1	..	..	..	2	1	..	..	..	1	1	..
78. Epilepsy	7	8	15	..	..	..	..	..	..	..	..	4	3	1	1	..	..	..	1	..	2	2	..	1

79-80. Convulsions (non-puerperal)	10	10	20	19	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
82. (2) Neuritis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
84. Other diseases of the nervous system																								
(2) Cerebral tumour	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
(3) Disseminated sclerosis	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2	..	..	..	..
(4) Paralysis agitans	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
(5) Other diseases included under 84	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
86. (1) Diseases of the mastoid sinus	2	1	3	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..
(2) Diseases of the ear	2	2	4	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
IV.—DISEASES OF THE CIRCULATORY SYSTEM.																								
88. (1) Malignant endocarditis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
(2) Other acute endocarditis	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
89. Angina pectoris	11	5	16	..	..	..	..	..	..	..	..	..	..	..	..	2	2	1	5	2	1	1	1	1
90. Other diseases of the heart :																								
(1) Aortic valve disease	5	..	5	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	..	..	1	..
(2) Mitral valve disease	7	7	14	..	..	..	..	..	1	..	..	1	..	1	..	1	..	..	1	1	2	5	..	1
(3) Aortic and mitral valve disease	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
(4) Other or unspecified valve disease	15	18	33	..	..	..	..	..	..	1	..	..	1	1	1	..	2	5	8	1	7	2	3	1
(5) Fatty heart	2	4	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	1	1	1
(6) Dilatation of heart (cause unspecified)	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
(7) Other or unspecified myocardial disease	81	67	148	..	..	..	..	..	..	..	..	..	1	1	..	1	1	1	15	12	24	28	28	36
(8) Disordered action of the heart	2	3	5	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	1
(9) Heart disease (undefined)	7	11	18	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	6	2	4	2	2
91. Diseases of the arteries :																								
(*a*) Aneurysm	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..
(*b*) (1) Arterio-sclerosis with cerebral vascular lesion	15	26	41	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	3	5	6	10	9	6
(2) Arterio-sclerosis without record of cerebral vascular lesion	15	13	28	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	5	8	11
(*c*) Other diseases of the arteries	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..

TABLE 1.—Continued.

Causes of Death.	M.	F.	All Ages	Ages at Death.																				
				0–1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70–75	75–80	80 +
92. Embolism and thrombosis (not cerebral)	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
93. Diseases of the veins (varix, haemorrhoids, phlebitis, etc.)	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..
94. Diseases of the lymphatic system (lymphangitis, etc.)	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
V.—DISEASES OF THE RESPIRATORY SYSTEM.																								
99. (*a*) Acute bronchitis	11	6	17	1	5	1	..	..	..	..	..	..	..	1	..	2	2	..	..	1	1	..	..	3
(*b*) Chronic bronchitis	17	7	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	3	3	5	6	6
(*c*) & (*d*) Bronchitis not distinguished as acute or chronic	31	21	52	6	3	..	1	..	1	..	..	..	..	..	..	1	1	2	1	4	6	10	10	2
100. Broncho-pneumonia	19	22	41	15	9	4	2	..	1	..	..	..	1	..	..	1	1	1	1	3	..	1	1	..
101. (*a*) Lobar pneumonia	10	3	13	1	..	..	1	1	2	..	..	1	..	..	1	1	..	1	..	3	..	..	1	..
(*b*) Pneumonia (not otherwise defined)	14	16	30	9	5	1	3	..	4	..	..	..	..	..	1	..	1	3	..	2	..	1	..	..
102. (1) Empyema	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(2) Other pleurisy	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..
103. Congestion and haemorrhagic infarct of lung	1	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1
105. Asthma	3	3	6	..	..	..	..	..	..	..	..	..	..	1	1	2	1	..	..	1	..	..	..	..
106. Pulmonary emphysema	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
107. (*a*) Chronic interstitial pneumonia, including occupational diseases of the lung	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..

VI.—DISEASES OF THE DIGESTIVE SYSTEM.																								
108. (1) Diseases of the teeth and gums	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
110. Diseases of the oesophagus	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
111. (*a*) Ulcer of the stomach	4	1	5	..	..	..	..	..	..	..	..	..	1	..	..	2	1	1	..	..	..	..	..	..
(*b*) Ulcer of the duodenum	2	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
112. (1) Inflammation of the stomach	1	4	5	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
113, 114, Diarrhoea and enteritis :																								
(2) Colitis	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..
(3) Other diseases included under 113, 114	21	11	32	23	5	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
117. Appendicitis	8	1	9	..	..	..	..	..	1	1	2	..	..	..	2	1	..	1	..	..	1	..	..	..
118. (*a*) Hernia	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..
(*b*) Intestinal obstruction	3	1	4	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..
119. Other diseases of the intestines :																								
(2) Other diseases included under 119	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
122. Cirrhosis of the liver :																								
(*a*) Returned as alcoholic	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
(*b*) Not returned as alcoholic	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
123. Biliary calculi	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..
124. Other diseases of the liver	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
126. Peritonitis without stated cause	1	1	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..
VII.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																								
128. Acute nephritis (including unspecified under 10 years of age)	3	2	5	..	..	..	1	1	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
129. Chronic nephritis (including unspecified over 10 years of age)	22	27	49	..	..	..	..	..	..	1	2	1	4	..	3	5	6	5	2	9	5	4	1	1
131. Other diseases of the kidney and annexa	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
132. Calculi of the urinary passages	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
133. (1) Cystitis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
(2) Other diseases of the bladder	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE I.—Continued.

Causes of Death.	M.	F.	All Ages	Ages at Death.																				
				0–1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70–75	75–80	80 +
135. Diseases of the prostate	6	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	2	1
137. Cysts, and other tumours of the ovary not returned as malignant	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
139. Tumours of the uterus not returned as malignant	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1
VIII.—THE PUERPERAL STATE.																								
143. (*b*) Ectopic gestation	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
144. Puerperal haemorrhage	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
145. Other accidents of childbirth	..	3	3	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..
146. Puerperal sepsis	..	3	3	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..
147. (1) Puerperal phlegmasia alba dolens not returned as septic	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
148. Puerperal albuminuria and convulsions	..	2	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																								
151. (1) Senile gangrene	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
(2) Other gangrene	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
152. Carbuncle, boil	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
154. (3) Pemphigus	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
X.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																								
155. (2) Other diseases of the bones	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..

XI.—CONGENITAL MALFORMATIONS.																								
159. (1) Congenital hydrocephalus	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(2) Congenital malformation of heart	6	4	10	8	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(3) Other congenital malformations	4	..	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XII.—DISEASES OF EARLY INFANCY																								
160. (1) Congenital debility & sclerema	9	4	13	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(2) Icterus neonatorum	1	1	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161. (1) Premature birth	27	14	41	41	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162. (2) Atelectasis	5	2	7	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XIII.—OLD AGE.																								
164. (1) Senile dementia..............	2	4	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
(2) Other forms of senile decay	23	25	48	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	8	10	26
XIV.—EXTERNAL CAUSES.																								
165, 166. Suicide by solid or liquid poisons and corrosive substances..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
167. Suicide by poisonous gas	4	2	6	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	..	..	1	..	..	..
169. ,, drowning	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..
171. ,, cutting or piercing instruments	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
176. Poisoning by venomous animals ..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
177. Other acute accidental poisoning (not by gas)	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
179. Accidental burns (conflagration excepted)	2	..	2	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
180. Accidental mechanical suffocation..	1	1	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
181. Accidental absorption of irrespirable or poisonous gas	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
182. Accidental drowning	4	1	5	..	..	..	..	..	..	..	..	1	3	..	..	..	..	..	..	1	..	..	..	..

TABLE I.—CONTINUED.

	Causes of Death.	M.	F.	All Ages	Ages at Death.																				
					0–1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70–75	75–80	80 +
	Accidental injury :—																								
185.	By fall	5	3	8	..	..	..	..	..	1	..	1	..	1	1	..	1	1	..	1	..	1	..	..	..
186.	In mining and quarrying	2	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..
187.	By machinery	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
188.	By other forms of crushing (road vehicles, on railways, etc.)	6	3	9	..	..	..	1	..	..	..	1	3	..	..	..	..	1	..	..	..	..	1	2	..
190.	Wounds of war	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
199.	Homicide by other means	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
201.	Fracture (cause not specified)	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
202.	Other and unstated forms of accidental violence	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
	XV.—ILL-DEFINED DISEASES.																								
205.	(1) Heart failure (age 1-70)	5	4	9	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2	2	3	..	..	..
	(2) Other ill-defined causes	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
	(3) Cause not specified	2	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
	Total Males	..	..	823	107	37	14	10	3	27	12	24	33	23	27	31	33	26	40	61	57	60	68	65	65
	Total Females	..	..	735	75	22	13	7	2	16	16	14	30	18	19	21	29	40	36	46	67	64	80	60	60
	GRAND TOTAL	823	735	1558	182	59	27	17	5	43	28	38	63	41	46	52	62	66	76	107	124	124	148	125	125

TABLE 1 (A.)—CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE COUNTY BOROUGH OF SOUTH SHIELDS FOR THE YEAR 1933. (Supplied by the Registrar-General).

Causes of Death.	Sex.	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
All Causes	M	822	107	37	27	39	57	50	64	66	118	128	129
	F	736	75	22	22	32	44	37	50	75	114	144	121
1 Typhoid and paratyphoid fevers	M	..	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..
2 Measles	M	21	5	8	5	3	..	..	..	..	..	..	..
	F	14	1	6	5	2	..	..	..	..	..	..	..
3 Scarlet fever	M	..	..	..	..	..	..	..	..	..	..	..	..
	F	1	..	..	..	1	..	..	..	..	..	..	..
4 Whooping cough	M	6	4	1	1	..	..	..	..	..	..	..	..
	F	9	7	..	2	..	..	..	..	..	..	..	..
5 Diphtheria	M	3	..	1	1	1		..	..	..	..	..	..
	F	2	..	..	1	..	1	..	..	..	..	..	..
6 Influenza	M	23	1	1	1	..	4	2	2	6	2	2	2
	F	26	..	..	1	4	4	1	4	3	3	3	3
7 Encephalitis lethargica	M	1	..	..	..	..	..	1	..	..	..	..	..
	F	1	..	..	..	1	..	..	..	..	..	..	..
8 Cerebro-spinal fever	M	2	..	1	1	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..
9 Tuberculosis of respiratory system	M	89	..	1	1	4	25	24	21	7	5	1	..
	F	68	..	1	..	8	24	16	10	4	4	1	..
10 Other tuberculous diseases	M	30	3	5	1	7	7	2	4	..	1	..	..
	F	22	1	..	4	8	4	1	1	1	1	1	..
11 Syphilis	M	3	..	..	..	..	..	..	..	1	2	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..
12 General paralysis of the insane, tabes dorsalis	M	7	..	..	..	..	..	1	3	2	..	1	..
	F	..	..	..	..	..	..	..	..	..	..	..	..
13 Cancer, malignant disease	M	67	..	..	..	..	..	2	4	9	26	16	10
	F	101	..	..	..	..	1	1	3	23	30	32	11
14 Diabetes	M	3	..	..	..	..	..	..	..	1	..	2	..
	F	11	..	..	..	1	..	1	1	..	5	2	1
15 Cerebral haemorrhage, etc.	M	29	..	..	..	..	..	1	..	..	7	11	10
	F	37	..	..	..	..	..	..	1	3	11	11	11
16 Heart disease	M	143	..	..	..	2	2	2	8	11	32	40	46
	F	124	..	..	1	1	2	4	3	10	27	43	33

TABLE 1 (A.)—CONTINUED.

Causes of Death.	Sex.	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
17 Aneurysm	M	4	..	..	..	..	..	..	..	2	2	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..
18 Other circulatory diseases	M	35	..	..	..	..	..	..	1	..	3	11	20
	F	47	..	..	..	..	..	..	..	2	7	17	21
19 Bronchitis..................	M	57	5	5	2	1	..	1	2	6	4	15	16
	F	35	3	3	..	..	..	..	..	2	5	11	11
20 Pneumonia (all forms)	M	44	11	6	7	6	1	..	3	3	5	1	1
	F	40	13	9	5	1	..	1	2	4	3	1	1
21 Other respiratory diseases....	M	8	..	..	..	..	..	1	2	3	1	..	1
	F	7	2	1	..	..	..	..	2	..	1	1	..
22 Peptic ulcer	M	6	..	..	..	..	..	1	2	2	1	..	..
	F	1	..	..	..	..	..	..	..	1	..	..	..
23 Diarrhoea, etc.	M	22	14	4	1	2	..	..	..	..	1	..	..
	F	17	11	1	..	1	..	1	1	1	1	..	..
24 Appendicitis	M	9	..	..	..	2	2	..	2	1	1	1	..
	F	1	..	..	..	..	..	..	1	..	..	..	..
25 Cirrhosis of liver	M	2	..	..	..	..	..	..	..	..	..	1	1
	F	..	..	..	..	..	..	..	..	..	..	..	..
26 Other diseases of liver, etc. ..	M	1	..	..	..	..	..	..	..	1	..	..	..
	F	1	..	..	..	..	..	..	..	..	..	1	..
27 Other digestive diseases......	M	11	1	1	1	1	..	..	1	..	2	3	1
	F	7	3	..	..	..	..	..	1	1	1	1	..
28 Acute and chronic nephritis ..	M	23	..	..	1	3	1	2	2	4	4	5	1
	F	28	..	..	1	..	2	2	7	7	5	3	1
29 Puerperal sepsis	F	4	..	..	..	..	1	2	1	..	..	..	..
30 Other puerperal causes	F	7	..	..	..	..	3	2	2	..	..	..	..
31 Congenital debility, premature birth, malformations..	M	52	51	..	1	..	..	..	..	..	..	..	..
	F	24	24	..	..	..	..	..	..	..	..	..	..
32 Senility	M	22	..	..	..	..	..	..	..	..	..	6	16
	F	26	..	..	..	..	..	..	..	..	..	5	21
33 Suicide	M	7	..	..	..	..	..	1	1	3	1	1	..
	F	3	..	..	..	..	..	1	1	1	..	..	..
34 Other violence..............	M	27	1	1	2	..	11	4	1	2	4	..	1
	F	13	1	..	..	1	..	1	1	3	..	3	3
35 Other defined diseases	M	59	11	3	1	6	4	5	5	2	10	9	3
	F	54	9	1	2	2	1	3	8	9	8	7	4
36 Causes ill-defined or unknown	M	6	..	..	..	..	..	..	..	..	4	2	..
	F	5	..	..	..	1	1	..	..	..	2	1	..

TABLE 2.—DEATHS DURING 1933 : SEASONAL AND WARD DISTRIBUTION.

CAUSES OF DEATH.	Total.	YEAR, 1933.				WARDS.†															
		First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Shields.	Beacon.	St. Hilda.	Hadrian.	Holborn.	Laygate.	Victoria.	Bents.	Rekendyke.	Westoe.	Deans.	Tyne Dock.	Simonside.	West Park.	Harton.	Unknown.*
All Causes (Certified	1497	457	357	334	349	62	100	83	119	99	88	98	84	110	96	105	145	106	108	85	9
All Causes (Uncertified	61	18	15	11	17	......	8	3	4	2	6	6	4	6	2	5	6	3	2	4	......
1 Enteric fever	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
2 Smallpox	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
3 Measles	35	......	19	15	1	3	......	3	1	3	4	1	2	2	......	1	5	4	4	2	......
4 Scarlet fever —	1	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......
5 Whooping cough	15	9	2	4	......	......	......	1	5	1	......	......	......	4	......	1	1	1	......	1	......
6 Diphtheria	5	1	......	2	2	......	......	......	1	......	......	......	......	1	......	......	2	......	1	......	......
7 Influenza	50	35	1	5	9	......	2	1	6	5	1	4	2	......	5	1	9	6	4	4	......
8 Encephalitis lethargica	2	......	1	......	1	......	......	......	......	......	......	......	......	......	......	......	......	2	......	......	......
9 Meningococcal meningitis	2	......	2	......	......	......	......	......	......	......	......	1	1	......	......	......	......	......	......	......	......
10 Tuberculosis of respiratory system	159	52	40	32	35	8	9	7	12	20	**14**	8	5	10	10	16	14	7	8	11	......
11 Other tuberculous diseases	51	15	13	18	5	2	......	4	2	8	**5**	2	1	7	1	4	8	2	3	2	......
12 Cancer, malignant disease	165	31	45	45	44	3	19	8	13	12	5	15	8	12	8	12	14	15	10	10	1
13 Rheumatic fever	5	1	1	......	3	......	1	......	......	......	......	......	1	......	......	1	1	1	......	......	......
14 Diabetes	14	3	2	3	6	1	......	1	......	1	1	2	2	1	......	1	......	1	2	1	......
15 Cerebral haemorrhage, etc.	66	19	20	13	14	5	5	1	8	......	......	3	6	6	3	2	7	8	7	5	......
16 Heart disease	250	72	59	52	67	10	19	11	15	9	17	24	19	13	21	19	22	12	17	17	5
17 Arterio-sclerosis	69	18	23	18	10	4	9	2	11	3	1	6	4	2	6	2	3	4	3	9	......
18 Bronchitis	93	39	19	11	24	3	6	6	9	3	11	4	4	9	2	8	11	7	8	1	1
19 Pneumonia (all forms)	84	38	23	13	10	1	2	9	7	10	9	3	2	10	4	5	14	2	5	1	......
20 Other respiratory diseases	15	4	4	5	2	1	1	3	......	......	1	2	2	......	2	......	1	......	2	......	......
21 Ulcer of stomach or duodenum	7	1	4	1	1	......	1	......	......	1	......	......	1	......	1	1	1	......	1	......	......
22 Diarrhoea, etc. (all ages)	34	4	4	13	13	1	4	5	1	1	3	3	2	3	......	1	2	6	2	......	......
23 Appendicitis	9	4	1	2	2	......	......	2	1	......	......	......	......	2	......	1	......	1	1	1	......
24 Cirrhosis of liver	3	......	......	1	2	......	1	......	......	......	1	......	......	......	......	......	......	......	......	1	......
25 Acute and chronic nephritis	54	15	15	9	15	2	4	2	4	2	4	6	7	7	1	4	5	2	2	2	......
26 Puerperal sepsis	3	......	1	1	1	......	......	......	......	......	......	2	......	......	......	1	......	......	......	......	......
27 Other accidents and diseases of pregnancy and parturition	8	3	1	3	1	1	......	......	1	......	......	2	......	1	......	1	......	......	2	......	......
28 Congenital debility and malformation, premature birth	71	23	16	14	18	7	2	4	5	4	5	3	5	9	3	5	5	4	5	5	......
29 Suicide	10	......	2	3	5	1	......	......	3	......	1	1	......	1	1	......	......	1	......	......	1
30 Other deaths from violence	36	8	5	10	13	1	4	4	2	3	......	......	3	......	4	2	4	3	4	2	......
31 Other defined diseases	229	75	47	51	56	7	17	12	16	15	10	12	10	14	26	19	21	18	19	12	1
32 Causes ill-defined or unknown	13	4	2	1	6	1	2	......	......	......	1	......	1	2	......	2	1	2	......	1	......
TOTAL	1558	475	372	345	366	62	108	86	123	101	94	104	88	116	98	110	151	109	110	89	9

* Deaths in Hospital of persons with no fixed abode.

† See Note to Table 11 (page 109).

TABLE 3.—DEATHS DURING 1933 IN INSTITUTIONS: AND TRANSFERABLE DEATHS.

CAUSES OF DEATH.	Deaths in Institutions in the Borough.		Deaths of South Shields Residents in Institutions outside the Borough.	Transferable Deaths.	
	Residents.	Non-Residents.		Inward.	Outward.
Enteric fever	......	......	......	......	......
Smallpox	......	......	......	......	......
Measles	2	......	......	......	......
Scarlet fever	1	......	......	......	......
Whooping cough	3	......	......	......	......
Diphtheria	5	1	......	......	1
Influenza	4	1	......	......	2
Encephalitis lethargica	......	4	......	......	4
Meningococcal meningitis	2	......	......	......	......
Tuberculosis of respiratory system	44	11	3	4	12
Other tuberculous diseases	20	7	2	2	7
Cancer, malignant disease	43	16	5	7	16
Rheumatic fever	......	......	1	1	......
Diabetes	5	3	1	1	3
Cerebral haemorrhage, etc.	5	4	3	3	5
Heart disease	86	49	3	10	49
Arterio-sclerosis	12	7	......	......	10
Bronchitis	6	4	1	1	5
Pneumonia (all forms)	11	13	1	1	14
Other respiratory diseases	4	2	......	......	2
Ulcer of stomach or duodenum	5	2	1	1	2
Diarrhoea, etc.	9	5	1	1	5
Appendicitis and typhlitis	8	1	2	2	1
Cirrhosis of liver	2	......	......	......	......
Acute and chronic nephritis	13	5	......	......	5
Puerperal sepsis	2	1	......	......	1
Other accidents and diseases of pregnancy and parturition	5	1	......	......	1
Congenital debility and malformation, premature birth	9	1	......	1	1
Suicide	1	2	......	1	4
Other deaths from violence	12	5	3	7	9
Other defined diseases	53	25	17	18	25
Causes ill-defined or unknown	3	......	......	3	1
TOTAL	375	170	44	64	185

TABLE 4.—POPULATION, BIRTHS, AND DEATHS FOR 1933 AND PREVIOUS YEARS.

Year.	Population estimated to middle of each year.	Births.			Total Deaths registered in the Borough		Transferable Deaths.		Net Deaths belonging to the Borough.			
		Uncorrected Number.	Net.				Of Non-Residents registered in the Borough.	Of Residents not registered in the Borough.	Under 1 year of age.		At all Ages.	
			Number.	Rate.	Number.	Rate.			Number.	Rate per 1,000 Net Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1915	109,855	3,265	3,275	29.6	1,871	17.0	28	287	468	143	2,130	19.4
1916	109,332	3,091	3,093	26.0	1,649	14.9	44	257	369	119	1,862	17.0
1917	106,500	2,699	2,714	22.8	1,750	16.4	33	271	362	133	1,988	18.6
1918	105,659	2,979	3,005	25.4	2,122	20.1	41	313	359	118	2,394	22.6
1919	111,502	3,104	3,130	26.9	1,687	15.1	37	242	370	118	1,892	17.0
1920	115,945	3,922	3,966	34.2	1,738	15.0	26	288	479	121	2,000	17.2
1921	118,400	3,464	3,507	29.6	1,541	13.0	12	272	335	96	1,801	15.2
1922	122,400	3,287	3,257	26.6	1,738	14.2	109	56	307	94	1,685	13.8
1923	124,500	3,152	3,144	25.3	1,766	14.2	110	58	297	94	1,714	13.8
1924	126,600	3,087	3,071	24.3	1,910	15.1	149	70	313	102	1,831	14.5
1925	124,600	2,997	2,976	23.9	1,867	14.9	153	56	340	114	1,770	14.2
1926	123,900	2,786	2,774	22.4	1,656	13.4	159	51	241	87	1,548	12.5
1927	123,400	2,470	2,449	19.8	1,725	14.0	164	79	225	92	1,640	13.3
1928	121,800	2,500	2,468	20.3	1,766	14.5	141	74	226	92	1,699	13.9
1929	119,600	2,370	2,355	19.7	1,925	16.1	174	69	288	122	1,820	15.2
1930	116,500	2,411	2,396	20.6	1,602	13.8	133	78	221	92	1,547	13.3
1931	114,200	2,377	2,362	20.7	1,868	16.4	157	75	272	115	1,786	15.6
1932	114,000	2,168	2,168	19.0	1,632	14.3	168	63	152	70	1,527	13.4
1933	114,100	1,961	1,963	17.2	1,679	14.7	185	64	182	93	1,558	13.7

NOTES.—(A) The rates in Columns 5, 7, and 13 are calculated per 1,000 of the population.

(B) The populations for the years 1915 onwards are the Registrar General's estimates of the *civilian* population.

For each of the years 1916, 1917, 1918, and 1919, the Registrar-General supplied two estimates of population :—

(1) for calculating birth-rates.
(2) „ „ death-rates.

The birth-rate population for these years was respectively 118,955 ; 118,717 ; 118,387 ; and 116,152. The *death-rate* (or *civilian*) population is shown in the table above.

(C) " **Transferable Deaths " are deaths of persons who, having a fixed or usual residence in England or Wales, died in a district other than that in which they resided.**

The large increase in the number of non-residents recorded since 1921 in column 8, and the decrease in the number of transferable deaths in column 9, is due to the Harton Poor Law Institution now being situated within the Borough.

TABLE 5.—BIRTH-RATES, INFANT MORTALITY RATES, AND DEATH RATES FROM VARIOUS CAUSES, 1871-1933.

YEAR.	Estimated Population.	Birth-rate.	Death-rate.	Principal Epidemic Diseases.								Phthisis.	Other Tuberculous Diseases.	Cancer.	Bronchitis.	Pneumonia.	Influenza.	Deaths under 1 year per 1,000 births.
				Total.	Smallpox.	Measles.	Scarlet Fever.	* Diphtheria.	Whooping Cough.	" Fever."	† Diarrhoea.							
Mean 1871-1880	50,580	43.1	25.5	6.0	.86	.42	1.44	.12	.78	.79	1.59	1.91	—	—	—	—	—	164
Mean 1881-1890	66,520	38.8	20.5	2.3	.01	.34	.45	.10	.44	.19	.78	1.84	—	—	—	—	—	140
Mean 1891-1900	87,022	36.1	20.1	2.45	.00	.44	.22	.11	.46	.28	.93	1.60	1.00	.63	2.00	1.47	.29	166
Mean 1901-1910	104,186	33.9	17.9	2.03	.02	.45	.17	.16	.47	.10	.66	1.50	.71	.72	1.41	1 28	.25	140
Mean 1911-1915	109,899	30.8	17.7	1.83	...	.44	.15	.09	.34	.06	.75	1.41	.58	.87	1.60	1.57	.25	130
Mean 1916-1920 ‡	109,788	27.0	18.5	1.12	.00	.31	.03	.10	.18	.02	.47	1.65	.61	.93	1.84	1.77	1.44	122
Mean 1911-1920	109,843	28.9	18.1	1.47	.00	.38	.09	.09	.26	.04	.61	1.53	.59	.90	1.72	1.67	.84	126
1921	118,400	29.6	15.2	1.37	...	.37	.03	.10	.23	.02	.62	1.44	.36	1.07	1.23	0.89	.49	96
1922	122,400	26.6	13.8	0.51	...	...	.02	.07	.17	.01	.24	1.29	.39	.97	1.30	1.30	.72	94
1923	124,500	25.3	13.8	1.47	...	.67	.04	.08	.46	...	.22	1.40	.43	1.01	1.03	1.05	.15	94
1924	126,600	24.3	14.5	0.69	...	.05	.06	.11	.06	.01	.40	1.28	.34	.98	1.33	1.13	1.22	102
1925	124,600	23.9	14.2	1.08	...	.28	.10	.05	.39	...	.26	1.34	.44	.99	1.32	1.31	.40	114
Mean 1921-1925	123,300	25.9	14.3	1.02	...	.27	.05	.08	.26	.01	.35	1.35	.39	1.00	1.24	1.14	.60	100
1926	123,900	22.4	12.5	0.61	.01	.08	.02	.06	.14	.03	.27	1.16	.62	1.00	1.05	0.88	.33	87
1927	123,400	19.8	13.3	0.51	.01	.15	...	.11	.06	...	.19	1.13	.43	1.04	1.12	1.32	.53	92
1928	121,800	20.3	13.9	0.56	.03	.10	...	.05	.16	...	.21	1.63	.50	1.18	1.06	1.21	.36	92
1929	119,600	19·7	15.2	0.72	...	.18	.01	.04	.20	...	.28	1.41	.54	1.30	1.05	1.74	.74	122
1930	116,500	20.6	13.3	0.43	...	.03	.01	.13	.03	...	.24	1.25	.41	1.36	1.01	0.83	.24	92
Mean 1925-1930 ...	121,040	20.5	13.6	0.56	.01	.11	.01	.08	.12	.01	.24	1.31	.50	1.17	1.06	1.20	.44	97
Mean 1921-1930 ...	122,170	23.2	13.9	0.79	.00	.19	.03	.08	.19	.01	.29	1.33	.44	1.09	1.15	1.17	.52	98
1931	114,200	20.7	15.6	0 77	...	.39	...	.02	.23	...	.13	1.24	.46	1.22	1.35	1.37	.60	115
1932	114,000	19.0	13.4	0.27	...	.07	...	...	.11	...	.10	1.46	.46	1.30	0.86	0.71	.35	70
1933	114,100	17.2	13.7	0.74	...	.31	.01	.04	.13	...	.25	1.39	.45	1.45	0.82	0.74	.44	93

* Since 1891, Membranous Croup has been included under Diphtheria.

† Diarrhoea and Enteritis (under 2 years of age) since 1905.

‡ See note (B) to Table 4, as regards population since 1915.

GENERAL PROVISION OF HEALTH SERVICES FOR THE BOROUGH.

Public Health Officers of the Authority.

A detailed list of the Public Health Officers of the Authority will be found on pages 3—5. The Public Health Services for the Borough have been described in my former reports. No developments or alterations have taken place in the various services except in the following :—

Nursing in the Home.

There are now four nurses employed by the South Shields and District Nursing Association, and increased use is being made of their services.

Hospitals.

The Ingham Infirmary is being extended to provide for 50 additional beds, to bring the total accommodation up to 177 beds.

Midwifery and Maternity Services.

The Council have agreed to pay the midwife's fee in those cases where insurance benefit has ceased (page 98).

Institutional Provision for Mothers and Children.

At the Public Assistance Committee's Convalescent Home, the Maternity and Child Welfare Committee have reserved 14 beds for children below school age (page 106).

Maternity and Nursing Homes.

There has been a slight reduction in the number of beds in private homes. These homes are regularly visited by the Inspector of Midwives and detailed records are kept of each (page 100).

SANITARY CIRCUMSTANCES OF THE BOROUGH.

Water Supply.

Water is supplied to the Borough by the Sunderland and South Shields Water Company. The supply is pure in quality and sufficient in quantity. One analysis was made during the year; the report of the Borough Analysts was as follows :—

	Parts per 100,000.
" Total solid matters in solution, dried at 100° C.	41.790
Chlorine existing as chlorides	4.047
Ammonia	0.002
Albuminoid ammonia	0.001
Nitrogen existing as nitrates	0.056
Oxygen absorbed in 15 minutes at 25° C.	0.013
,, ,, 4 hours ,,	0.029
Lead and other poisonous metals	None.
Hardness before boiling, Dr. Clark's scale	37.0°
,, after boiling one hour, Dr. Clark's scale, (1° = 1 part of calcium carbonate per 100,000)	13.0°
Appearance in two-foot tube	Almost colourless and clear
Smell when warmed	None.
Microscopical examination of sediment	Satisfactory.
Hardness (temporary) removed by boiling	24.0°

Calcium carbonate	17.93
Magnesium carbonate	8.22
Calcium sulphate	0.30
Magnesium sulphate	8.37
Magnesium nitrate	0.30
Sodium chloride	6.67
Siliceous matter	trace
	41.79

This is a normal sample of the Company's water. It is very pure organically, practically free from suspended matter, and in our opinion (though its hardness is of course a disadvantage) suitable for a town supply."

There was a complaint from a user, that the water contained " water shrimps," which was remedied by the Company.

The supply was cut off from 47 premises for non-payment of the water rate, and on payment of arrears was restored to 64 premises from which it had been cut off.

In the case of 44 houses in which there were cases of infectious disease, at the instance of the Health Department the Water Company refrained from cutting off the supply in spite of the tenants being in arrears with the water rate.

Drainage and Sewerage.

All the sewage of the Borough is discharged into the River Tyne. The system generally is sufficient for the needs of the Borough.

Rivers and Streams.

A joint Committee of the River Tyne riparian authorities and the Tyne Fishery Board made a survey of the river and made certain recommendations with a view to the prevention of further pollution of the river, but no joint action was taken during the year.

Closet Accommodation.

The Borough is entirely served by the water carriage system except that there are three privy receptacles in an isolated part of East Jarrow. During the year 21 new water closets were installed and 26 portable dustbins were provided at the instance of the Sanitary Inspectors to abate nuisances. There are approximately 23,500 w.c.'s in the Borough.

Public Cleansing.

The arrangements for public cleansing and scavenging are substantially as described in my former reports.

Sanitary Inspection.

Tables showing the classified visits paid by the inspectors will be found on page 41. 384 complaints were received at the Health Department in respect of nuisances, including housing defects, overcrowding, defective closets and drains, etc. These were investigated by the inspectors and remedies found in the great majority of cases by informal action.

Smoke Abatement.

No serious nuisance from smoke occurred during the year. It was, unfortunately, unnecessary to make observation on factory chimneys.

Offensive Trades.

At the end of the year there were in the Borough :

76 fish friers.
3 tripe boilers (one at the Abattoir).
2 gut scrapers (both at the Abattoir).
3 rag and bone dealers.
1 tallow melter.
1 blood boiler.

Three applications for registration as fish friers were received : two were granted and one was adjourned.

The sanitary inspectors paid 276 visits to these premises. On the whole the sanitary conditions are satisfactory and the byelaws are observed.

Lodging Houses.

There are 29 lodging houses licensed to accommodate 415 seamen. The Police paid 905 visits to these premises and the sanitary inspectors paid 268 visits.

There are also 12 common lodging houses with accommodation for 567 lodgers ; the registration of 10 of these houses is required to be renewed annually. The Police paid 398 visits and the sanitary inspectors paid 97 visits during the year.

Houses Let-in-Lodgings.

During the past few years a number of good residential houses of 8 to 10 rooms have been vacated and have been bought, often at a figure below their value, and turned into tenements without due provision being made for the increased number of persons occupying them. It is almost impossible to keep an accurate register of these houses as the tenants are continually changing. Frequently the rents charged for these sublet rooms are exorbitant ; as much as 10/- is charged for a single room. One owner was recently found to have sublet three houses as follows :—

	£	s.	d.
(*a*) 11 rooms, 10 tenants, 17 adults, 13 children, weekly rent	3	2	0
(*b*) 9 rooms, 7 tenants, 16 adults, 13 children, weekly rent	2	14	0
(*c*) 10 rooms, 9 tenants, 15 adults, 8 children, weekly rent	3	2	0

or a total rent of about £460 per annum for these houses.

Under the byelaws the owners have been required to provide adequate water closet accommodation, sufficient water supply, sinks, and drains, cooking facilities and facilities for the storage of food, adequate lighting for common staircases, refuse disposal, etc. The owners in each case carry out the requirements of the byelaws without demur ; they can well afford it.

As the rooms are usually of ample proportions there is no question of insufficient air or floor space, but there is lack of supervision ; the owners do not reside on the premises and seldom visit them. Some of the tenants do not keep their rooms clean.

It has become a very difficult problem, and one cannot help thinking that by enforcing the byelaws, subletting is being sanctioned and perpetuated. A more satisfactory method of dealing with these large houses would be to require the owners, before sub-letting, to deposit plans for their conversion into small flats. At the moment, it would appear that the remedy will not be found until there is a sufficiency of small houses or flats available at a rent which the class of tenant who require such can afford to pay.

255 visits were paid to houses-let-in-lodgings by the inspectors, and 6 notices were served to provide suitable sanitary accommodation and other facilities.

Stables and Allotments.

1,075 visits were paid by the inspectors to stables and allotments to ensure that accumulations of manure were not allowed to remain long enough to become a nuisance.

Rat Repression.

252 visits were paid by the inspectors in consequence of complaints of the existence of rats. Improvements to the premises and repair of drains were carried out in many cases which effectively barred the entrance of rats. In other instances suitable advice was given regarding baiting, trapping, etc. The provisions of the Rats and Mice Destruction Act were advertised in the local press early in the year, and a large number of posters on the subject were placed in prominent positions on garden allotments. A rat catcher is employed at Harton Colliery and at Harton Institution by arrangement with the County Council.

Theatres and Cinemas.

There are 13 cinemas and one theatre in the Borough. They are regularly inspected and no insanitary defects were found during the year.

Rag Flock Acts, 1911 and 1928.

No action was necessary under these Acts during the year. There are 10 premises at which rag flock is used or sold.

Factories, Workshops, etc.

The Inspectors paid 531 visits during the year. The following are the details.

1. Factories (including Factory Laundries).
   Inspections, 20 ; Notices, 6.
2. Workshops (including Workshop Laundries).
   Inspections, 154 ; Notices, 3.
3. Workplaces (other than Outworkers' Premises).
   Inspections, 357 ; Notices, —.

The defects found are summarised as follows :—

Particulars of Defect.	Number of Defects.			
	Found.	Remedied.	Receiving attention.	Referred to H.M. Inspector.
Nuisances under the Public Health Acts :*				
Want of cleanliness	1	1	..	..
Want of ventilation	..	..	..	..
Overcrowding	..	..	..	..
Want of drainage of floors	..	..	..	..
Other nuisances	4	4	..	..
Sanitary accommodation—				
Insufficient	..	..	..	..
Unsuitable or defective	2	1	1	..
Not separate for sexes	1	..	1	..
Offences under Factory and Workshop Act :				
Illegal occupation of underground bakehouse (s. 101)	..	..	..	..
Breach of special sanitary requirements for bakehouses (s. 97 to 100)	1	1	..	..
Other offences (excluding offences relating to Outwork)	..	..	..	..
Total	9	7	2	..

* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

The number of workshops on the Register at the end of the year was 243. The principal trades are :—

Dressmakers, Tailors, Milliners, etc.	53
Boot Repairers	15
Bakers	58*
Joiners, Upholsterers, etc.	40
Smiths	6
Plumbers	11

The Register has been revised by removing from the list a number of workshops which have been closed for some time.

* Exclusive of 11 factory bakehouses.

Only two Outworkers engaged as Contractors in the making of wearing apparel were notified to me during the year.

Inspections under the Shops Acts.

The following is a summary of the work of the Shops Inspector during 1933 :—

Number of shops on 31st December, 1933 (occupied)	2,163
(vacant)	142
Number of licensed premises (in about 80 per cent. of which assistants are employed)	128
Number of visits paid to shops (including stalls in Market Place ; stalls, cafes, etc., on foreshore and licensed premises)	2,667
Interviews and appointments	77
Complaints received and investigated	38

INFRINGEMENTS OF THE SHOPS ACTS :

Prescribed forms of notice as to assistants' weekly half holidays not exhibited	91
Prescribed forms of notice as to assistants' weekly half holiday not made up to date	26
Non-observance of early closing days	22
No early closing day notices exhibited	62
Early closing day notices not properly posted	27
Notices in respect of young persons not exhibited	4
Trading after hours	12
	244

202 of these infringements were first offences, and the persons in default were cautioned by the Inspector both verbally and by written intimation.

Forty-two cases were reported to the Health Committee as follows :—

Drapers	11	
Do. (Market Stall Holders)	3	
	—	14
Butchers	4	
Do. (Market Stall Holders)	2	
	—	6
Grocers, Provision Dealers	4	
Do. do. (Market Stall Holders)	1	
	—	5
Hairdressers	5	
Do. (Sunday Closing Act)	1	
	—	6
Fruiterers	5	
Tobacconists	3	
Music Dealers	1	
Boot and Shoe Dealers	1	
Fish Friers	1	

In twenty-nine of these cases, letters of caution were, on the instructions of the Committee sent by the Town Clerk.

In eleven cases prosecutions were instituted, ten of the defaulters being convicted, fines being imposed as follows :—five 20/- each ; five 10/- each.

One case was dismissed, the trader being summoned for two offences, and this case was taken into account when a fine was imposed on the first offence.

In two cases where the Committee decided to prosecute, the Town Clerk decided that the evidence did not justify proceedings being taken, and no further action was taken.

761 circulars relating to the closing hours under the Shops (Hours of Closing) Act, 1928, were issued to shop keepers, and 99 copies of the Second Schedule of the Shops Act, 1912, stating the trades and businesses which were exempted from the provisions as to weekly half holidays ; 185 copies of extracts of the regulations relating to the Shops Acts, and 3 notices in respect of the hours persons under 18 years of age (Young Persons) may be employed.

The operation of the provisions of the Shops (Hours of Closing) Act, 1928, was suspended by order of the Town Council on Good Friday Eve, 13th April, 1933, and by order of the Home Secretary, from 18th December, 1933 to 23rd December, 1933, both days inclusive.

The Acts which are under the supervision of the Shops Inspector are :—

1. The Shops Act, 1912.
2. The Shops Act, 1913.
3. The Shops (Hours of Closing) Act, 1928.

These Acts together are cited as the Shops Acts, 1912 to 1928.

4. The Hairdressers and Barbers' Shops (Sunday Closing) Act, 1930.

Under the Shops Act, 1912, the following Closing Orders are in force :—

1. The South Shields Hairdressers' Weekly Half Holiday Order, 1913.
2. The South Shields Butchers' Half Holiday Order, 1915.
3. The South Shields Butchers' Closing Order, 1920.
4. The South Shields Pork Butchers' Closing Order, 1921.
5. The South Shields Hairdressers' Closing Order, 1922.
6. The South Shields Drapers' etc., Weekly Half Holiday Order, 1925.
7. The South Shields Drapers' etc., Closing Order, 1925.

The Drapers' etc., Orders apply to the trade or business of a Draper, Milliner, Clothier, Mercer or Outfitter.

135 copies of the above-named Orders were issued to traders as follows :—

Half Holiday Orders :—	Hairdressers	16
	Drapers, etc.	15
	Butchers	6
Closing Orders :—	Drapers, etc.	47
	Hairdressers	26
	Butchers	24
	Pork Butchers	1

The following special Orders are also in force :—

1. The South Shields Holiday Resort Order, 1912, which suspends the obligation to close all shops on the Weekly Half Holiday in each year during the months of June, July, August and September.
2. The Ocean Road Exempted Area Order (Stationers, etc.) which includes the retail trade or business of a Stationer, Picture Postcard Dealer, Fancy Goods Dealer and Toy Dealer.
3. The Tyne Dock Exempted Area Order, Grocers', etc., which includes the retail trade or business of a Grocer, Draper, Barber, Boot Dealer and Ship Store Merchant.
4. The Stationers' Exempted Order, 1914, which applies to the retail trade or business of a Stationer in all shops in the Borough.

Six copies of the Holiday Resort Order, 1912, were issued to traders.

TABLE 6.—SUMMARY OF VISITS AND INSPECTIONS PAID BY SANITARY INSPECTORS.

Nature of Visit.	R.W. Weir.	W. Smith.	C. Skelton.	J. McVay.*	Total.
General district inspection (including housing inspection and inspection of underground rooms)	2,889	1,802	1,714	2,332	8,737
Inspection of repairs to property	35	318	559	316	1,228
Interviews and appointments	23	75	175	59	332
Investigation of complaints of nuisances	76	236	255	195	762
Testing drains	3	2	8	9	22
Exhumations	..	4	..	..	4
Special Inspections—					
Seamen's lodging houses	3	..	231	34	268
Common lodging houses	1	..	73	23	97
Houses let in lodgings	..	244	..	11	255
Van dwellings	..	9	51	12	72
Housing survey	216	30	140	76	462
Rent Act certificates	..	..	13	..	13
Picture halls	23	2	6	..	31
Fried fish shops	48	47	154	7	256
Bakehouses	..	24	90	2	116
Marine stores	..	..	20	..	20
Other factories	..	4	..	1	5
Other workshops	5	31	..	4	40
Yards	611	..	..	..	611
Stables and allotments	604	304	159	8	1,075
Refuse tips	86	103	11	15	215
Rat and vermin repression	..	107	84	61	252
School latrines	5	..	..	..	5
Other visits	60	..	..	..	60
Visits *re* cases of infectious disease: on notification of cases: or on disinfection of premises	63	160	65	52	340
Re cases of tuberculosis	14	36	65	22	137
Re contacts of smallpox	1	..	1	1	3
,, ,, scarlet fever	10	..	..	..	10
Total visits	4,776	3,538	3,874	3,240	15,428

* From February 1st.

TABLE 7.—SUMMARY OF NOTICES ISSUED BY SANITARY INSPECTORS.

	R. W. Weir.	W. Smith.	C. Skelton.	J. McVay.	Total.
Preliminary Notices were served on 319 Property Owners for					
(A) Houses not kept in all respects reasonably fit for habitation	3	44	88	68	203
(B) Nuisances caused by—					
Caravan without water supply or w.c. accommodation	..	..	1	1	2
Drains choked or defective	..	10	13	10	33
W.c.'s defective	1	..	2	4	7
Scullery sinks defective	1	1	6	8	16
Rat infested premises	..	2	1	1	4
Refuse accumulations	..	2	3	..	5
Insanitary underground rain water cistern	..	..	1	..	1
Insanitary stables	..	..	3	..	3
Insanitary rag and bone stores	..	..	3	..	3
Absence of proper water supply	..	..	2	..	2
W.c. accommodation insufficient	..	2	2	4	8
Ashbin accommodation insufficient	..	..	4	..	4
Yard paving defective	..	..	1	11	12
Minor defects	1	2	9	4	16
Preliminary Notices were served on 38 Tenants for—					
Dwellings overcrowded	..	..	1	..	1
Rooms dirty	..	..	2	..	2
Filthy yard, etc.	..	1	3	..	4
Fried fish shop : pans and premises not clean	..	..	1	..	1
Caravan occupied without water supply or w.c. accommodation	..	..	1	..	1
Drains or w.c. choked	1	4	..	1	6
Refuse accumulations	..	5	3	2	10
Keeping animals	..	2	..	..	2
Statutory Notices : On Owners					
Under Public Health Acts	..	1	3	3	7
Under Section 17, Housing Act, 1930	..	..	..	..	..
Under Houses-let-in-lodgings Byelaws	..	6	..	..	6
Statutory Notices : On Occupiers—					
Under Public Health Act, 1875	..	..	..	..	..

TABLE 8.—STRUCTURAL IMPROVEMENTS EFFECTED.

Nature of Work.	R. W. Weir.	W. Smith.	C. Skelton.	J. McVay.	Total.
Houses : closed or demolished*	..	1	..	..	1
generally improved	21	87	122	109	339
Drains : provided	..	13	..	3	16
relaid	..	7	2	..	9
repaired	..	..	15	4	19
chambers, gulleys, traps, etc., provided or renewed	3	11	..	7	21
Yards and Areas : relaid	1	1	..	6	8
repaired	..	9	22	5	36
areas filled in	..	..	..	5	5
W.C.'s : newly provided (complete)	1	5	13	2	21
basins, cisterns, etc., replaced or repaired	5	2	13	12	32
Dustbins : provided (portable)	1	13	11	1	26
Baths : wastepipes or traps provided	..	2	..	..	2
Washups : of metal, replaced by stoneware	1	8	4	1	14
newly provided (complete)	..	9	..	1	10
traps, waste pipes, etc., provided or repaired	3	5	12	7	27
Rainwater cisterns (underground) : filled in	1	2	6	..	9
Wash-houses : rebuilt or repaired	..	11	18	3	32
floors relaid or repaired	..	..	14	1	15
Out-buildings : provided, rebuilt or repaired	1	..	42	10	53
Stables : generally improved	..	3	8	..	11

* Exclusive of Clearance Areas (see page 44).

HOUSING.

At the end of 1933 there were, according to the Rate Books, 28,802 inhabited houses in South Shields. Of these 10,357 are registered as decontrolled houses under Section 2 of the Rent, etc., Amendment Act, 1933.

During 1933, 256 self-contained houses and 118 flats were built in the Borough by private enterprise. 254 flats were built by the Council under the Housing Act, 1930, to replace houses demolished in the Clearance Areas and in addition 118 houses were built by the Council for aged persons. Farnham Road, Egerton Road, Dean Road and Green Lane Housing schemes were completed. At the end of the year negotiations for the acquisition of other land were still proceeding. In order to speed up the clearance of slum areas and the demolition of individual unfit houses the Council resolved that the five year plan suggested by the Ministry of Health should be reduced to a three year plan, but already much time has been lost on account of the difficulty in obtaining suitable building sites in the Borough.

Clearance Areas.

Thames Street Area.—This scheme was completed in August, when the last of the houses was demolished. There were altogether 106 houses, 448 families, 1,735 persons when the area was represented. Actually 1,818 persons were displaced but on account of exchanges and alteration of family groups, 2,006 persons were housed on the Council's estates. Most of the tenants were rehoused in the Dean Road and Egerton Square areas and some at Stanley Terrace.

Mitre Street Area.—The Order became operative on 10th April, and a start was made at once to rehouse the tenants. The clearance was almost completed by the middle of May, and demolitions followed quickly, the demand for old bricks being a helping cause. There were altogether 43 houses and 1 other building, and 194 families, numbering 698 persons when the area was represented. Actually 721 persons were displaced, but by exchanges, etc., 812 persons were housed in the Council's estates. Most of the tenants were rehoused in the Farnham Road and Green Lane areas.

Drake's Street and Laygate Square Areas.—An inquiry by the Ministry of Health into these schemes was held on 12th May, the Orders being confirmed on 28th July. When they became operative six weeks later, however, the Council's schemes for rehousing were nearing completion, and accommodation was available for only 19 families out of the 65 who were scheduled. Keys were issued to the most necessitous cases, taking into consideration the worst overcrowding, the more dangerous buildings and ailments of various kinds. Thus 46 families were left in the areas at the end of the year under increasingly bad conditions. The Council's efforts to acquire more land were being continued at the end of the year.

One house in Laygate Square was excluded from the Order by the Ministry on an undertaking given on behalf of the owner that the house would be put into habitable condition. Proceedings were then commenced under Section 19 of the Housing Act, 1930, and in consequence of failure by the owner to carry out his undertaking the Council made a demolition order, which became operative at the end of the year. In due course the tenants will be rehoused and the building demolished.

HOLBORN AREAS.—These areas comprising 150 houses, 30 other buildings, 536 families and 2,184 persons were represented as clearance areas to the Council on 14th March, 1933. Details as to ownership, inhabitants and maps and plans were being proceeded with at the end of the year.

Individual Unfit Houses.

458 defective dwelling-houses were rendered fit for habitation during the year as a result of action taken by the Housing and Sanitary Inspectors.

In addition to the houses demolished in the clearance areas 13 other unfit houses and 19 separate tenements were condemned by order in 1933 and 67 families of 310 persons displaced, 302 persons being transferred to new houses. But for the difficulty in providing accommodation, more progress would have been made in rehousing.

Without proceedings under statutory powers one house was demolished and four separate tenements closed.

An appeal by a house owner against a demolition order made by the Council in January was heard by his Honour Judge Thesiger on April 5th and 6th at the South Shields County Court. On the second day his Honour viewed the house and then reserved his judgment to the next meeting of the Court in May, when he dismissed the appeal without costs. Subsequently the seven tenants were rehoused and the building was demolished.

Before the operation of the 1930 Housing Act a limited number of houses were condemned annually and the occupiers simply left the premises and filled up gaps elsewhere. This movement ceased altogether about 1926 or 1927, because there were no suitable tenements empty. A new era arose, however, when the Councils were given power to secure land upon which to build houses for those living in condemned dwellings, especially when the process required to be on such sweeping lines as the clearance of whole areas. In the tables below will be seen the progress made in South Shields in moving people from unfit houses to healthy homes built on modern principles.

It is to be remembered, however, that this change represents merely displacement from old houses to new and that for every bad tenement wiped out only one good tenement takes its place. An excess of good houses should be aimed at so that the bad and those rapidly becoming bad should be eliminated.

Another object concerns the rent. Whilst the inclusive weekly rent for the A2, A3, and A4 types of flats shown below is very reasonable, in fact very cheap compared with far inferior accommodation in other parts of the town, it is in many cases too much for the poor people for whom they are intended.

Houses-let-in-lodgings.

Comment on houses let in lodgings will be found in the section of this report dealing with the sanitary circumstances of the Borough.

Rent Acts.

Three applications were made for certificates under the Rent, etc., Restriction Acts. Two were granted and one was refused.

Administration.

The work of the Housing Inspectors is summarised in the following statistics, which do not include Clearance Areas.

1.—*Inspection of dwelling-houses during the year* :—

(1)	(*a*)	Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	4,645
	(*b*)	Number of inspections made for the purpose . .	6,899
(2)	(*a*)	Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	70
	(*b*)	Number of inspections made for the purpose . .	70

(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	3*
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	483*
2.—*Remedy of defects during the year without service of formal notices* :—	
Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	451*
3.—*Action under statutory powers during the year* :—	
A. Proceedings under sections 17, 18 and 23 of the Housing Act, 1930:	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	..
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(*a*) By Owners	..
(*b*) By local authority in default of owners	..
B. Proceedings under Public Health Acts :	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied ..	7
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :	
(*a*) By Owners	7
(*b*) By local authority in default of owners	..
C. Proceedings under sections 19 and 21 of the Housing Act, 1930 :	
(1) Number of dwelling-houses in respect of which Demolition Orders were made	15 (60 tenements)
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders (60 tenements)	15†
D. Proceedings under section 20 of the Housing Act, 1930 :	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	23§
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	..

* Drainage defects and external nuisances excluded.

† In addition, one other house was demolished without an Order.

§ In addition, four separate tenements were closed without an Order.

Housing Act, 1930—Displacements and Rehousing up to December, 31st, 1933.

AREAS.	Houses.	Families	PERSONS.		
			At Count.	Dis-placed.	Housed.
Thames Street	106	448	1,735	1,818	2.006
Mitre Street	43	194	698	721	812
Drake Street	7	19	126	123	117
Laygate Square............	1	2	7	7	7
Individual Unfit Houses or Separate Tenements....	..	131	..	616	592
Total	..	794	..	3,285	3,524

Houses built in Flats under 1930 Act (22 Flats to the Acre) in 1932 and 1933.

ESTATE.	Type A2.	Type A3.	Type A4.	Total No. of Flats.
Stanley Terrace	32	36	..	68
Dean Road	104	108	20	232
Tyne Dock................	..	10	2	12
Egerton Road	4	74	18	96
Farnham Road	100	102	14	216
Green Lane	92	28	..	120
Total	332	358	54	744

744=3,496 Persons on the basis of Section 37 of the Housing Act, 1930.

	Rent.	Rates.	Water.	Weekly.
A2=Living Room, 2 Bedrooms, Bathroom, Scullery	3/11	2/1	9d.	6/9
A3=Living Room, 3 Bedrooms, Bathroom, Scullery	4/9	2/4	10d.	7/11
A4=Living Room, 4 Bedrooms, Bathroom, Scullery	5/6	2/6	11d.	8/11

Plus 6d. in Summer and 1/- in Winter for Electric Light.

AGED PERSONS HOUSES IN ADDITION=118.

INSPECTION AND SUPERVISION OF FOOD.

Milk Supply.

During the year three routine veterinary inspections of milch cows were carried out by the Veterinary Inspector at the eight farms within the Borough ; the Town Council having during the year decided that in future such inspections shall be made quarterly.

The number of animals inspected was 89, 91 and 96 respectively.

The general condition of the herds was good. Two notifications were received under the Tuberculosis Order, 1925. Information of the first case was given to the Police who discovered an emaciated cow, which was in too weak a condition to stand, lying hidden in an outbuilding. The Veterinary Inspector examined the animal and notified it as suffering from advanced tuberculosis. The animal was removed from the farm, slaughtered and the carcase destroyed. Subsequently proceedings were taken against the owner under the Tuberculosis Order, 1925, for failing to notify the case, and a fine of £10 and £3 3s. 0d. costs was imposed.

The existance of this cow was not disclosed to the Veterinary Officer when making his routine inspection about a month before the police discovered it.

No compensation was paid in respect of this case.

The second case, notified about six months later on the same farm, was, on a post mortem examination being held, found to be suffering from advanced tuberculosis. £2 10s. 0d. compensation was paid.

Thirty-nine samples of milk were taken for biological examination ; 17 of these were taken at the railway station, and 22 at local farms.

The results of 33 were negative and 6 positive. Of the latter one was a sample taken at the railway station from a consignment of milk from a North Riding producer. The result of the examination was forwarded to the County Medical Officer of Health and the diseased animal was located and destroyed.

Of the remaining positive samples one sample was taken from the bulk supply of 17 cows at the farm. A veterinary inspection did not reveal any clinical symptoms of disease in the herd, and six group samples were therefore taken, three of which were found to be positive. Shortly after these samples were obtained the use of the milking machine was discontinued. Six individual samples were then taken, one of which was found to be positive, the remainder negative. During the time these were being examined one cow developed suspicious symptoms and was later (January, 1934) notified. A post mortem examination revealed that the animal was suffering from miliary tuberculosis.

Twenty-seven further samples of milk were taken and sent for bacteriological examination to the Agricultural Department, Armstrong College, Newcastle-upon-Tyne. Sixteen were of ordinary milk taken on delivery at the Railway Station, five of ordinary milk taken at local farms and six of Graded milks taken at dairymen's premises soon after delivery.

All samples were from different sources of production.

The results of examination were as follows :—

Sample Number.	Total number of micro-organisms per 1 cubic centimetre.	Coliform Content.				
		1 c.c	.1 c.c.	.01 c.c	.001 c.c.	Grade.
1	86,000	+	—	—	—	....
2	41,000	+	+	—	—	....
3	1,390	—	—	—	—	....
4	23,600	+	+	—	—	....
5	5,700	+	—	—	—	....
6	93,600	+	+	—	—	....
7	356,000	+	+	—	—	....
8	8,800	+	—	—	—	....
9	890	+	—	—	—	....
10	790	—	—	—	—	....
11	5,500	—	—	—	—	....
12	316,000	+	+	—	—	....
13	23,600	+	+	—	—	....
14	172,000	+	+	—	—	....
15	24,600	+	+	—	—	....
16	2,400,000	+	+	+	+	....
17	864,000	+	+	+	+	....
18	1,920,000	+	+	+	+	....
19	2,000,000	+	+	+	+	....
20	36,000	+	+	+	—	" A."
21	348,000	+	+	+	—	" A."
22	790	—	—	—	—	" A." (T.T.)
23	1,430	+	—	—	—	" Certified "
24	1,600	—	—	—	—	....
25	1,370	+	—	—	—	....
26	2,080	—	—	—	—	" A." (T.T.)
27	3,040	+	—	—	—	" A." (T.T.)

Cow Sheds, Dairies, etc.

Considerable alterations and improvements have been carried out to two cowsheds and one producer's dairy.

Two small dairies have been fitted up for the retail milk trade.

Bottled Milk.

During the year the Town Council adopted certain recommendations relating to the registration of persons desiring to sell bottled milk.

These recommendations will secure a more effective control of the sale of bottled milk particularly regarding the nature of the business carried on and better conditions of storage.

It will be noticed from the figures given below that there has been a substantial reduction in the number of registered retailers of bottled milk.

The number of retailers on the register on 31st December, 1933, was as follows :—

	Loose Milk.	*Bottled Milk.*	*Totals.*
Registered December 31st, 1932	125	187	312
Number registered during 1933........	9	..	9
	134	187	321
Less struck off register during 1933	12	46	58
No. on register December 31st, 1933 ..	122	141	263

Eight of these are producer-retailers whose premises are within the Borough, and five are producer-retailers from premises situate outside the Borough.

Milk (Special Designations) Order, 1923.

Eight dealers licences were granted to four dairymen under the above-mentioned Order.

To Pasteurise and sell........................	1
To bottle and sell " Grade A."	2
Supplementary licence to sell " Grade A."	1
To bottle and sell " Grade A. (T.T.) "	1
To sell " Grade A. T.T."	1
To sell " Certified "	2

There are no licensed producers of graded milk within the Borough.

Meat Inspection at the Abattoir.

There are no private slaughterhouses in the Borough ; all slaughtering of animals for food must be carried out at the Abattoir.

The following table gives the number of animals slaughtered at the public abattoir during the past eight years :—

	1926	1927	1928	1929	1930	1931	1932	1933
Beasts	2,611	2,752	2,278	2,019	2,325	2,408	2,503	2,374
Calves . .	360	349	390	332	387	228	108	158
Sheep . .	18,016	26,743	29,340	25,503	25,036	29,219	40,071	35,680
Pigs . .	3,335	6,192	7,230	5,638	4,886	6,124	8,410	6.958
Totals . .	24,322	36,036	39,238	33,492	32,634	37,979	51,092	45,170

Food Condemned.

The following are particulars of the food condemned and destroyed during the year :—

At the Abattoir :—

On account of Tuberculosis :—

	Cows.	Heifers.	Bullocks.	Bulls.	Calves.	Pigs.	Total.
Whole carcase and offal	12	3	. .	. .	2	4	21
Parts and organs condemned . .	120	48	24	7	1	205	405
Total animals affected	132	51	24	7	3	209	426

Parts and organs condemned on account of Tuberculosis :—

	Cows.	Heifers.	Bullocks	Bulls.	Calves.	Pigs.
Forequarters	2	2	5	..	..	..
Hindquarters	2	..	2	..	..	..
Heads	20	17	5	2	..	49
Lungs	112	31	23	6	1	31
Livers	7	4	3	..	..	33
Tripes	3	..	2	..	..	150
Fats and guts	22	8	4	1	..	..
Udders	6	..	..	..	..	..

Total Weight :	Beef	10,873 lbs.
	Veal	224 lbs.
	Pork	1,003 lbs.
	Total	12,100 lbs.

For other diseases and conditions :—

BEASTS :—

		lbs.
Whole carcase and offal (septic peritonitis)	1	335
,, ,, (pyaemia)	1	271
Hindquarters (bruised)	2	120
Lungs (abscess)	2	
Livers (cirrhosis)	20	
Livers (multiple abscesses)	4	
Fats and guts (Johne's Disease)	3	
Udders (mastitis)	4	
Total		726

SHEEP :—

		lbs.
Whole carcase and offal (dropsy and emaciation)	24	635
,, ,, (found dead)	8	379
Legs, etc. (worried by dog) pieces	22	179
Loin (bruised) piece	1	4
Livers (flukes)	30	
Total		1,197

Pigs :—

		lbs.
Whole carcase and offal (jaundice)	1	78
,, ,, (found dead)	1	92
Lungs (pneumonia)	1	
Lungs (parasitic cysts)	2	
Livers ,,	2	
Livers (cirrhosis)	5	
Tripes (inflammation)	2	
Total		160

Outside the Abattoir :

The whole of the undermentioned foodstuffs were condemned on account of decomposition or unsoundness :—

			lbs.
Beef, English	pieces	16	317
,, chilled	pieces	2	16
Pork, English	piece	1	37
Kidneys, frozen		20	19
Rabbits, English		30	60
Cauliflowers		6	9
Cherries, imported		..	36
Peaches		15	3
Tomatoes		..	6
Total			503

Total weight of foodstuffs condemned :—

Beef, mutton, pork, rabbits, fruit and vegetables, 14,686 lbs.

Tinned and bottled goods condemned :—

Milk (full cream and skimmed)	2,192
Cream	216
Corned beef	168
Boiled beef	1
Lunch tongue, etc.	66
Spiced ham	6
Salmon	216
Lobster	2
Crab	2
Crayfish	22
Prawns	4
Brisling, sild	62
Fish paste (various)	29
Meat paste (various)	49
Peas (cooked)	125
Beans (baked)	72
Apricots	32
Peaches	207
Pears	194
Pineapple	729
Fruit salad	16
Loganberries	253
Plums	24
Grape fruit	24
Oranges	9
Gooseberries	9
Greengages	6
Strawberries	4
Tomatoes	1,232
Tomato soup	7
Celery soup	1
Pickles (various)	37
Lemon curd	120

Food Premises.

The following is a summary of visits paid by the Food Inspector to the various premises under his supervision. Visits are also paid by the Sanitary and Shops Inspectors.

	No. of premises at end of year.	*No. of Visits.*
§Butchers shops and Pork Butchers	158	139
Wholesale meat shops	4	64
Fried fish shops	76	..
Fish shops.............................	32 & 1 stall	28
Fish curing places.....................	1	3
‡Dairies and milkshops.................	263	555
†Ice cream shops	80 (approx)	13
Cowsheds	8	61
Bakehouses (factories and workshops)	69	13
*Triperies	3	78
*Gutscraping places	2	68
Market Place...........................	1	125
Slaughterhouse (Public)	1	426
Piggeries	34	32
Other visits, sampling, etc.............	..	759
		2,364

* Inclusive of one tripe-preparer and two gutscrapers who use premises at the Abattoir.

† Number varies considerably—does not include stalls on beach during the summer.

‡ Includes premises where bottled milk only is sold.

§ Excludes stalls in Market Place (average 15).

The number of piggeries, many of which were situate at allotment gardens, has been considerably reduced during the past two years, and the sites are now occupied by dwelling houses.

Ice Cream.

The supervision and control of the preparation, storage and sale of ice cream is still a difficult problem owing to the absence of powers for compulsory registration similar to that applied to milk vendors.

Food and Drugs (Adulteration) Act, 1928.

The total number of samples taken under this Act during the year and submitted to the Public Analyst was 219, of which 194 were taken informally.

The following is a summary of the samples, results of analysis, and action taken.

MILK.

100 samples were taken, 77 of which were informal.
89 samples were genuine.
11 samples were deficient as under :—

(1)	5.0	per cent. in	milk-fat &	(5)	10.0	per cent. in	milk-fat
	2.8	,,	non-fatty solids	(6)	11.6	,,	,,
				(7)	46.6	,,	,,
(2)	6.6	,,	milk-fat &	(8)	58.3	,,	,,
	14.7	,,	non-fatty solids	(9)	4.1	,,	non-fatty solids
(3)	6.6	,,	milk-fat	(10)	5.1	,,	,,
(4)	10.0	,,	,,	(11)	6.2	,,	,,

Ten of these samples were taken informally. Nos. (5), (7), (8), and (11) were taken at shops to further ascertain the extent of the practice of opening bottles of milk and the quality of the milk. No. (6) was followed-up by taking a formal sample which was certified as genuine.

The producer of the consignment from which sample No. (4) was taken discontinued sending milk into the Borough within a few days of the sample being taken. The producer of sample No. (3) was cautioned. Samples Nos. (1), (2) (9) and (10) will be followed-up.

Two samples of "Grade A. (T.T.)" milk and one of "Certified" milk were sent for analysis and reported genuine.

One of the samples of "Grade A. (T.T.)" milk was suspected of being treated by means of heat. The Public Analyst in his remarks states the composition was very nearly average milk and probably not sterilized or treated milk, the taste leading to the same conclusion.

Twenty-nine samples of milk were taken at the railway stations, sixty-seven at retailers shops, two from street vendors, one at a farm and one at an institution.

DRIED MILK.

Four informal samples of dried milk were submitted for analysis; two from a local clinic and two from retailers' shops. Both retailers were cautioned for not complying with the Dried Milk Regulations in respect of packing and marking and as to the necessity of keeping the dried milk under conditions such as to prevent contamination from dust, flies, etc.

The making of further regulations relating to the sale of dried milk from bulk stocks might well be considered especially for shops such as general dealers who stock almost everything required, including green-groceries, second-hand books and magazines, and even run lending libraries.

The results of the analyses were as follows :—

	Fats.	*Proteids.*	*Milk Sugar.*	*Water.*	*Ash.*	*Total.*
A.	26.30	24.00	36.84	7.36	5.50	100.00
D.	26.10	24.75	37.71	5.86	5.58	100.00
D.	26.00	24.56	37.42	6.42	5.60	100.00
D.	26.00	25.00	36.74	6.74	5.52	100.00

CHEESE.

Five informal samples of cheese were taken, four of which were genuine and one of Cheshire cheese, which should contain as a minimum 30 per cent. of fat, was not genuine, being deficient in fat by 9.3 per cent. of that minimal quantity.

LARD.

Twelve informal samples of lard were taken; ten of these were genuine. Two were certified to be not genuine, one of which contained cotton seed oil. A further sample of a lard substitute described as "Lardine" was also submitted for analysis.

VINEGAR.

Fourteen samples of vinegar were taken. Ten informal samples were genuine, two informal and two formal samples were certified to be deficient in acetic acid to the extent of 48.2, 25.0, 32.5 and 21.2 per cent. respectively.

The vendors of the formal samples were cautioned.

RICE.

Six informal samples of rice were genuine, but in two cases the rice was certified by the Public Analyst to be "faced" with mineral matter, but the amounts 0.36 per cent. and 0.30 per cent. were below the maximum suggested as allowable (0.5 per cent.)

LEMON CHEESE.

One informal sample of lemon cheese taken from a consignment which appeared to contain an excessive quantity of water was submitted to the Public Analyst: the result of the analysis was as follows:—

Sugars	11.0	per cent.	Acid, as citric (with a little lemon flavour)	0.4	per cent.
Starch	35.0	,,			
Egg about	6.0	,,			
			Water, about	46	,,

In his remarks the Analyst states "lemon curd should contain sugar, butter, egg and lemon juice and rind. The sugar should form more than 50 per cent. of the whole and the butter (or margarine if that be used) about 10 per cent. This sample contains no butter: the only fat (below 1 per cent.) is that which I have calculated as egg: the chief solid constituent is a mixture of maize and wheat starch (cornflour and ordinary flour); and there is a great excess of water."

CURRANTS, RAISINS AND SULTANAS.

Seven samples of currants and five samples of raisins were free from preservatives.

Eight samples of sultanas were taken, two of which contained preservatives; the amounts being 250 and 140 parts respectively of sulphur dioxide per million.

TOMATOES.

A complaint was received from a family who stated that they were taken ill after consuming freshly cut tomatoes purchased from a local allotment holder. The tomatoes were wiped over before being eaten. Only one remained unconsumed, and this had also been wiped over with a dry cloth. This tomato was sent to the Public Analyst together with a pound of tomatoes purchased at the same premises and cut from the plants in the presence of the purchaser and not wiped.

The Public Analyst in his certificate states " We find all these tomatoes have a small amount of arsenic upon their skins.

The rubbed tomato ....0.04 part per million.

The unrubbed tomatoes, direct from
the grower ....0.05 part per million.

The arsenic is only upon the skins and does not penetrate it as it is not found in the pulp. Although the quantity of arsenic is small, it should not be there at all, and the grower should be told that he runs a grave risk in using any insecticide containing arsenic upon an article of food. Although the quantity of arsenic upon these tomatoes was small, at another time, with other tomatoes, it might be large.

The limit for arsenic in foods is 1/100 grain per pound, which is equivalent to 1.43 parts per million."

All allotment holders have been warned through their Associations of the great danger of using insecticides, especially those containing arsenic for the spraying of tomatoes or other articles of food.

Sausage.

No samples have been taken during the year. A circular letter was sent to all butchers instructing them on the question of the maximum amount of preservative allowed in sausage and the necessity of measuring the fluid proportionate to amount of sausage meat instead of adding it haphazardly.

Other Samples.

Fifty-four samples of the following substances were also taken all of which were genuine :—

Butter, 22 ; margarine, 10 ; tapioca, 2 ; sago, 1 ; " Farola," 1 ; pure coffee, 3 ; coffee and chicory, 3 ; coffee essence, 1 ; cocoa, 2 ; split peas, 1 ; sweets, 2 ; olive oil, 2 ; citric acid, 1 ; boric acid, 1 ; acetic acid, 1 ; Seidlitz powders, 1.

ARTIFICIAL CREAM ACT, 1929.

No samples were taken.

MERCHANDISE MARKS ACT, 1926.

A number of traders were cautioned for failing to comply with requirements of the Act and Order in respect of marking apples and tomatoes when exposed for sale.

AGRICULTURAL PRODUCE (GRADING AND MARKING) ACTS 1928 and 1931.

No offences were noted during the year.

FERTILISERS AND FEEDING STUFFS ACT, 1926.

One informal sample of fertiliser and two informal samples of feeding stuffs were taken at retailers premises and forwarded to the Agricultural analyst :

Sulphate of potash, 1 ; Fish meal, 1 ; Barley meal, 1 ; all of which were found to comply with the requirements of the regulations and agreed with the statements on the labels within the limits of variation allowed.

DISEASES OF ANIMALS ACTS, 1894 to 1927.

Two prosecutions under the above-mentioned Act were instituted by the Police in respect of offences against the provisions of the following Orders :—

TUBERCULOSIS ORDER, 1925.

Failing to notify a tubercular cow. Fine £10 and £3 3s. 0d. costs.

FOOT AND MOUTH DISEASE (PACKING MATERIALS) ORDER, 1925 AND 1926.

Failing to destroy packing straw. Dismissed with a caution on payment of costs.

NOTIFIABLE DISEASES.

There were no alterations during 1933 in the list of diseases ompulsorily notifiable under the Notification Acts and Regulaions.

revalence.

For several years the incidence of infectious disease has been articularly low with the exception of pneumonia, but towards the nd of the year there were indications of an increase in the number f cases of scarlet fever of a rather more severe type. The attack ate for scarlet fever was only one-third of that of the country enerally, and for diphtheria the rate was only one-fifth.

The following table shows the number of cases of acute nfectious diseases notified during each of the past eleven years :—

Disease.	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
allpox	..	1	10	392	960	890	281	7	..	5	..
ckenpox	..	..	..	791	586	1394	653	670	..	..	..
rlet fever	364	734	409	130	216	174	164	116	124	57	119
htheria	77	68	54	47	73	51	62	45	19	26	24
eric fever	9	12	11	10	7	2	..	1	..	..	..
tinued fever	..	..	..	1	..	1	..	..	..	..	..
entery	..	..	2	1	..	1	1	..	..	..	2
aria	2	1	1	3	2	2	2	..	3	4	1
bro-spinal fever	..	1	..	1	..	..	..	1	31	16	6
o-myelitis	1	3	2	3	1	3	2	..	..	1	..
o-encephalitis	..	..	..	..	..	1	..	..	1	..	1
ephalitis lethargica	3	9	2	6	6	4	..	2	1	2	3
umonia : primary	336	423	471	380	617	590	586	345	532	479	426
umonia : influenzal	15	108	32	34	79	33	78	10	30	25	23
rperal fever	3	5	4	7	4	5	11	5	1	3	2
rperal pyrexia	..	..	..	1	6	8	7	11	8	13	11
sipelas	29	25	36	30	31	47	55	57	41	41	5[illegible]
thalmia neonatorum	32	19	27	23	20	14	14	14	7	6	10

The age-incidence of the cases notified during 1933, the number hich occurred in each ward of the town, the number removed to ospital, and the deaths from each disease will be found in table 9, age 69.

There were no cases of smallpox, enteric fever, continued fever, elapsing fever, cholera, plague, polio-myelitis or typhus fever eported during the year.

The attack-rate per 1,000 population for certain infectious diseases for England and Wales as compared with South Shields is as under :—

	England and Wales.	*South Shields.*
Smallpox	0.02	..
Scarlet fever	3.21	1.04
Diphtheria	1.18	0.21
Enteric fever	0.04	..
Puerperal fever	0.05	0.02*
Puerperal pyrexia	0.14	0.09
Erysipelas	0.45	0.51

If stated as a rate per 1,000 total births the case rate for puerperal fever and puerperal pyrexia was as under :—

	England and Wales.	*South Shields.*
Puerperal fever	3.5	1.00*
Puerperal pyrexia	9.6	5.35

* Exclusive of one non-notified case.

Seasonal Incidence.

The following table shows the number of cases notified in each month of the year 1933 :—

DISEASE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet fever	7	3	12	5	4	1	1	4	15	14	31	22	119
Diphtheria	1	6	..	..	3	2	1	3	1	2	3	2	24
Enteric fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-spinal fever	..	..	1	1	1	1	..	2	..	..	..	..	6
Encephalitis lethargica	..	1	..	..	..	1	..	..	..	..	1	..	3
Polio-encephalitis	..	..	..	1	..	..	..	..	..	..	..	..	1
Primary pneumonia	61	37	42	35	59	45	34	20	15	30	25	23	426
Influenzal pneumonia	17	1	3	1	..	..	1	..	..	..	..	..	23
Puerperal fever	..	..	..	..	..	..	..	..	..	..	..	2	2
Puerperal pyrexia	..	..	2	2	..	..	..	1	2	1	1	2	11
Erysipelas	8	3	7	1	3	4	..	4	2	9	8	9	58
Ophthalmia neonatorum	1	..	..	1	2	1	..	1	2	1	..	1	10
Malaria	..	..	..	..	..	..	..	..	1	..	..	..	1
Dysentery	..	2	..	..	..	..	..	..	..	..	..	..	2
TOTAL	95	53	67	47	72	55	37	35	38	57	69	61	686

SMALLPOX.

No case of smallpox was notified during the year.

VACCINATION.

During the year ended 30th September, 1933, 632 primary vaccinations were performed by the Public Vaccinators, including 617 children under a year old, and 8 persons were re-vaccinated.

Of the 2,172 births registered in 1932, 870 infants were successfully vaccinated by the 31st January, 1934. In 1,080 cases there was conscientious objection to vaccination on the part of the parents. In 11 cases vaccination was unsuccessful through insusceptibility ; 121 children died unvaccinated ; in 25 cases vaccination was postponed on medical grounds ; 11 children removed to other districts ; 45 could not be traced, and 9 remained unaccounted for. It was not necessary to take proceedings before the magistrates during the year for defaults under the Vaccination Acts or Order.

SCARLET FEVER.

119 cases of scarlet fever were notified during 1933 as compared with 57 during the previous year. There was one death which occurred on the 31st December, 1932, but was registered on the 1st January, 1933. The patient developed endocarditis consequent on an attack of acute rheumatic fever some months previously. 96 or 81 per cent. of the cases were removed to hospital. There were 15 secondary cases in 11 houses and 8 "return cases" in 6 houses. The primary cases from whom the "return cases" developed had been isolated in hospital from 33 to 46 days, and it is probable that not more than two ought to be classified as "return cases."

DIPHTHERIA.

Only 24 cases of diphtheria were reported during the year, including one case where the disease as the cause of death was only revealed by post mortem examination. 22 of the cases were removed to hospital. There were 5 deaths from the disease, including that just referred to, but exclusive of a death in a non-resident who had been notified from Harton Hospital. The case mortality therefore was 6 out of 24 cases. There were no secondary cases.

68,000 units of anti-toxin were supplied to doctors for the treatment of cases or suspected cases at home.

Diphtheria is a disease which had always a low incidence in South Shields, but even that low incidence has steadily declined during the past 10 years.

ENTERIC FEVER.

For the sixth year in succession there was no case of enteric fever notified during the year. One suspected case—a cadet from a ship—was admitted to hospital, but he was found to be suffering from pneumonia.

PNEUMONIA.

426 cases of primary pneumonia and 23 cases of influenzal pneumonia were notified. The disease which had steadily increased during the previous year and reached its maximum of 125 cases in December, 1932, declined steadily until December, 1933, when only 23 cases were notified. In spite of the hot summer there were more cases during the summer months than in the corresponding months of the previous year.

There were 84 deaths from primary pneumonia and 19 from the influenzal type of the disease. Eleven deaths occurred among patients who had not been previously certified.

211 pneumonia jackets were supplied by the Health Department at the request of the doctor attending. Four cases were admitted to the Deans Hospital, and a considerable number to Harton Hospital.

584 visits were paid by the Health Visitors to the homes of 361 of the notified cases. 21 cases were referred to the South Shields and District Nursing Association whose nurses paid a total of 319 visits at the cost of the Council.

CEREBRO-SPINAL FEVER.

Six cases of the disease were notified during 1933 ; all were removed to hospital. Of the six notified cases three were true cerebro-spinal fever, two proved to be tuberculous meningitis and one pneumonia. Two of the true cases of cerebro-spinal fever died ; the cases diagnosed as tuberculous meningitis and the cases of pneumonia also died. In addition three suspected cases were admitted to hospital but they were diagnosed as tuberculous meningitis.

ENCEPHALITIS LETHARGICA.

Three cases were notified : one a girl of 13 years, another a man of 29, and the third a non-resident, a woman of 42. They all died, the woman on the day the case was notified.

POLIOENCEPHALITIS AND ACUTE ANTERIOR POLIOMYELITIS.

One case, a child of two, who was notified as polioencephalitis died : the death was certified as being due to acute anterior poliomyelitis. There were no notifications of the latter disease during the year.

OTHER DISEASES.

One case of malaria was notified : the patient was a seafarer who contracted the disease abroad. In addition one South Shields resident, also a seaman, died from malignant tertian malaria in the hospital of another authority. Two cases of dysentery were notified : one was an ex-soldier who had contracted the disease in the Army and the other a seaman who became infected abroad.

58 cases of erysipelas were notified, 26 of which occurred in the last quarter of the year. There were four deaths from this disease.

Two cases of puerperal fever, 11 of puerperal pyrexia and 10 of ophthalmia neonatorum were notified. These are referred to in the section of this report dealing with Maternity and Child Welfare.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Information regarding infectious diseases which are not compulsorily notifiable is received mainly through the head teachers in the schools. The cases are visited and in this way children under school age can be supervised and precautions taken to prevent the spread of the disease to other members of the family.

MEASLES.

Measles was much more prevalent than during 1932, particularly from April to July. The Health visitors paid 978 visits to the homes of 889 cases. There were 35 deaths : 19 in the second quarter of the year, 15 in the third and one in the fourth quarter. 30 of the deaths occurred among children under 5 years of age. Three cases were admitted to the Deans Hospital and six were referred to the South Shields and District Nursing Association.

WHOOPING COUGH.

This disease was not so prevalent as in 1932. Most of the cases occurred in the first half of the year. The Health Visitors paid 201 visits to the homes of 190 cases. There were 15 deaths, all in children under 5 years. Nine of the deaths occurred in the first quarter of the year, 2 in the second and 4 in the third. One case was referred to the South Shields and District Nursing Association.

CHICKENPOX.

The Health Visitors paid 638 visits to the homes of 620 cases. The disease was more prevalent than in 1932, particularly in the first six months.

MUMPS.

There was a marked increase in the number of cases of mumps over that of 1932. The Health Visitors paid 1,698 visits to the homes of 1,670 cases.

ENTERITIS.

Probably on account of the warm summer there was a greater number of cases of enteritis. There were 28 deaths among children under 2 years of age. Of the deaths, 18 occurred among boys and 10 among girls. Three of the deaths occurred in the first quarter of the year, 3 in the second, 11 in the third and 11 in the last quarter.

The death rate from enteritis was 14.4 per 1,000 births (or 0.25 per 1,000 of the population) as compared with a rate of 9.4 per 1,000 births in the 118 County Boroughs and Great Towns of England and Wales.

ISOLATION HOSPITAL.

Accommodation.

The total accommodation for cases of infectious disease on the recognised standard of floor space is 38 beds. That number of cases was not exceeded during the year. The lowest number in hospital was two patients on January 1st and 2nd and August 31st and September 1st.

The following table shows the number of cases treated during the year :—

Notified Diseases.	Remaining in on Dec. 31st, 1932.	Admitted during 1933.	Discharged.	Died.	Remaining in on Dec. 31st, 1933.
Scarlet fever	1	96	73	..	24
Diphtheria	..	22	15	5	2
Cerebro-spinal fever	1	6	2	5	..
Suspected scarlet fever	..	2	2	..	..
,, diphtheria	..	6	6	..	..
,, enteric fever	..	1	1	..	..
,, cerebro-spinal fever	..	3	..	3	..
Influenza	..	1	1	..	..
Pneumonia	..	4	3	1	..
Measles	..	3	3	..	..
Erysipelas	..	1	..	1	..
Other diseases	..	4	4	..	..
Total	2	149	110	15	26

The average daily number of cases under treatment in hospital is shown below.

Notified Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average.
Scarlet fever	3	6	6	11	8	2	1	1	7	12	25	28	9
Enteric fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	..	3	3	..	2	2	1	0	1	1	2	2	1
Cerebro-spinal fever	1	..	1	1	0	1	1	0	..	..	..	..	0
Others	1	1	1	1	0	1	2	4	0	1	0	..	1
Totals	5	10	11	13	10	6	5	5	8	14	27	30	11

Scarlet Fever.

96 cases of scarlet fever were admitted ; one proved to be a case of German measles. On the whole the type of the disease was mild, but towards the end of the year a more severe type of the disease was met with. Two suspected cases were admitted ; one proved to be a case of scarlet fever and the other German measles. There were no deaths from scarlet fever during the year. The average duration of the stay in hospital was 40 days.

Diphtheria.

22 cases were admitted, principally of the faucial type. There were 5 deaths : one died within a few hours after admission, three after one day, and one seven days after admission. The average duration of stay in hospital, excluding fatal cases was 27 days. Six cases of suspected diphtheria were also admitted : these proved to be follicular tonsillitis (five cases) and retropharyngeal abscess (one case).

Enteric Fever.

One suspected case of enteric fever, a cadet from a ship, was admitted. He was re-diagnosed as acute lobar pneumonia. He recovered and was discharged in 42 days.

Cerebro-spinal Fever.

Six cases were admitted, three proved to be true cerebro-spinal fever—one died after one day and one after two days in hospital, and the third recovered. Two cases were re-diagnosed as tuberculous meningitis of whom one died after two days, and the other after 55 days in hospital. The sixth case was a case of pneumonia, and she died the day after admission.

Measles.

Three cases of measles were admitted. One was also suffering from chickenpox and another from broncho-pneumonia—they all recovered.

Pneumonia.

Four cases were admitted—one died after six days in hospital, the remainder recovered.

Other Diseases.

One case of severe influenza was removed from an overcrowded house, 10 persons in 2 rooms. Three cases of suspected enteritis, one premature infant suffering from malnutrition and one patient suffering from erysipelas were admitted. The latter died after 7 days in hospital.

TABLE 9.—CASES OF, AND DEATHS FROM, NOTIFIABLE INFECTIOUS DISEASE IN SOUTH SHIELDS DURING THE YEAR 1933.

Notifiable Diseases.	No. of Cases notified.													No. of Cases notified in each Ward.																No. of Cases admitted to Isolation Hospital.	No. of Deaths.*												
	At all ages.	At following Ages—Years.												Shields.	Beacon.	St. Hilda.	Hadrian.	Holborn.	Laygate.	Victoria.	Bents.	Rekendyke.	Westoe.	Deans.	Tyne Dock.	Simonside.	West Park.	Harton.	Institutions.†		At all ages.	At following Ages—Years.											
		0-	1-	2-	3-	4-	5-	10-	15-	20-	35-	45-	65-																			0-	1-	2-	3-	4-	5-	10-	15-	20-	35-	45-	65-
Smallpox	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Diphtheria	24	......	1	1	2	2	10	2	2	4	......	......	......	......	......	1	1	......	......	2	1	6	2	......	3	3	3	1	1	22	5	......	1	......	1	1	1	......	1	......	......	......	......
Erysipelas	58	2	......	1	......	......	4	3	1	6	5	28	8	3	3	2	4	......	6	2	2	7	7	3	4	3	4	3	5	1	4	......	......	1	......	......	......	......	......	......	......	1	2
Scarlet fever	119	......	4	6	7	8	52	22	8	11	1	......	......	1	8	3	3	1	3	5	13	6	8	10	13	15	18	11	1	97	1	......	......	......	......	......	......	1	......	......	......	......	......
Enteric fever	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Puerperal fever	2	......	......	......	......	......	......	......	1	1	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	1	......	3	......	......	......	......	......	......	......	......	2	1	......	......
Puerperal pyrexia	11	......	......	......	......	......	......	......	......	7	4	......	......	......	......	1	1	......	......	1	1	1	1	2	1	......	1	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Cerebro-spinal fever	6	......	......	3	......	......	1	2	......	......	......	......	......	......	......	......	......	......	......	2	2	1	......	......	1	......	......	......	......	6	2	......	......	1	......	......	1	......	......	......	......	......	......
Encephalitis lethargica	3	......	......	......	......	......	......	1	......	1	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	2	......	......	1	......	2	......	......	......	......	......	......	1	......	1	......	......	......
Pneumonia : primary	426	44	62	53	42	23	67	20	15	24	23	39	14	26	10	27	27	27	21	14	10	29	10	19	95	53	30	8	20	4	84	25	14	5	6	1	7	......	......	2	4	16	4
Do. influenzal	23	......	1	......	1	1	2	2	2	4	1	6	3	1	4	......	2	2	2	3	1	......	5	1	1	......	......	......	1	......	19	......	1	1	1	......	......	1	2	4	......	5	4
Ophthalmia neonatorum	10	10	......	......	......	......	......	......	......	......	......	......	......	......	......	1	4	1	......	2	1	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Malaria	1	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	1	......	......	......	......	......	......	......	......	1	......	......	......
Polio-encephalitis	1	......	......	1	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	1	......	......	......	......	......	......	......	......	......
Dysentery	2	......	......	......	......	......	......	......	......	......	2	......	......	......	1	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Tuberculosis‡	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Total	686	56	68	65	52	34	136	52	29	59	37	73	25	31	27	35	42	31	32	32	32	50	34	35	118	76	56	24	31	130	122	25	16	9	8	2	9	3	3	10	5	22	10

* Including inward transferable deaths and cases not previously notified, but excluding outward transfers.

† Non-residents of the Borough and permanent inmates of Institutions. Other cases admitted to the Institutions have been distributed in the wards according to their previous home address in the Borough.

‡ Reference to notification of tuberculosis is made on page 74.

MUNICIPAL LABORATORY.

The following table shows in detail the work carried out during the year in the Municipal Laboratory at Stanhope Road Clinic premises.

Nature of Examination.	
Swabs for diphtheria bacilli	338
Sputum, etc., for tubercle bacilli	703
Blood for Widal re-action	1
Faeces for typhoid bacilli	3
Pus for gonococci, etc.	17
Urine for chemical and microscopical examination	53
Water from Public Baths	12
Cerebro-spinal fluid	28
Blood films, meat, etc.	19

In addition to the preparation of media, vaccines, stains and reagents carried out in the laboratory, certain examinations cognate to the work were made at the Venereal Diseases clinic, and specimens were sent from the clinic to the College of Medicine, Newcastle, for examination. The details are shown on page 93.

TUBERCULOSIS.

There were no changes in the staff of the Tuberculosis Scheme during 1933.

On account of the number of medical cases at Harton Hospital it was not found possible fully to utilise the wards allocated for cases of tuberculosis. It will be remembered that the Ministry of Health approved of these wards as a temporary measure ; that approval expires at the end of 1934.

Early in 1933, the Council decided to allocate 50 houses on the Housing Estates as vacancies occurred, to tuberculous families living under conditions of overcrowding. At the end of the year 40 families comprising 124 adults and 101 children were occupying these houses. In some cases the full rent was paid by the tenants. but in others part of the rent was paid by the Health Committee to the Housing Committee. The cost to the Health Committee during the year was £181.

Since the tuberculosis scheme was inaugurated in South Shields 20 years have elapsed. It might prove of interest to trace shortly the growth of the scheme to its present dimensions. In 1913 under the Tuberculosis Regulations, 1911, a Tuberculosis Officer and a nurse were appointed and a clinic established at the Town Hall. The Council had no beds for the residential treatment of tuberculosis but the National Health Insurance Committee had reserved 8 beds at Stanhope and Wolsingham Sanatoria. The work grew rapidly during 1914 and larger clinic premises, complete with laboratory were provided in what up to then was the Weights and Measures Department. During the War the work was somewhat curtailed and was carried on by a rota of medical practitioners. In 1917 an ultra violet ray apparatus was installed, and in 1920 the Education Committee purchased an X-ray installation which, while useful for certain forms of treatment and screening bones and joints, was not powerful enough to be of value in pulmonary radiography. Two huts complete with bed and bedding were also provided and lent to patients living in overcrowded conditions. These were in use many years. In June, 1919, the Council entered into an agreement with the Ingham Infirmary to treat surgical cases of tuberculosis in uninsured persons, the Health Insurance Committee having made similar arrangements in 1918 for insured persons. On the passing of the Public Health (Tuberculosis) Act, 1921, treatment of insured persons suffering from tuberculosis was transferred from Insurance Committees to County and County Borough Councils, and it became necessary to make larger provision for residential treatment of the disease. Accordingly it was decided to convert the Mansion House at Cleadon Park, which up to then had been unoccupied, into a sanatorium. The first patient was admitted in July, 1921. Provision was at first made for 25 patients; later, in 1922, four additional beds were provided and in 1923, 16 additional beds were provided, making the total accommodation 45 beds.

Prior to this the Council had decided to provide a combined isolation hospital and sanatorium of 188 beds, and had in fact in 1920 accepted a tender for the erection of the building but the scheme was abandoned, I believe, at the instance of the Ministry of Health for economic reasons.

Arrangements were made with the Stannington Sanatorium in 1924. Additional beds were also reserved in Stanhope and Wolsingham Sanatoria in 1930. Since 1921 the average number of beds occupied by South Shields patients has increased from 8 to 69 in 1933 and in addition in the latter year there was an average of 30 beds occupied at Harton Hospital at the cost of the Health Committee. Thus there were 168 patients treated in sanatoria and hospitals, and 135 at Harton Hospital during 1933 at the cost of the Health Committee. The treatment of tuberculosis has also advanced. Apparatus for artificial pneumothorax was provided in 1924, and an up-to-date X-ray plant was installed in 1931.

At the instigation of the South Shields Corporation conversations took place with neighbouring authorities during 1931 with a view to the establishment of a large modern sanatorium capable of dealing with all cases in the North Eastern area, but at the moment the proposal appears to be in abeyance.

In 1925 an open-air day school was established to deal with delicate children who might be prone to tuberculosis. An extension of the school from 110 places to 180 was carried out in 1931.

Besides the numerous schemes for treating the disease, other schemes for its prevention have been in force ; the control of meat by the establishment of a public slaughterhouse at which an appreciable number of carcases are destroyed when found to be infected with tuberculosis ; the examination of cows in the farms and the bacteriological examination of milk produced in and imported into the Borough, and action taken to have cows suspected of being tuberculous segregated, and those found to be definitely tuberculous destroyed. Lastly, and perhaps the most important preventive measure is the clearance of slum areas. As will be seen from page 77 there has always been a high incidence in the disease in these areas. The demolition of the houses and the removal of the inhabitants to better conditions ought to have the effect of reducing the incidence of the disease in the town generally. In spite of all that has been done it is disappointing to find that in South Shields there is a higher mortality from tuberculosis than in most other parts of the country. In mitigation, however, it should be remembered that the foreign population increase our death rate from this disease by about 10 per cent.

No action was taken during 1933 under the Public Health (Prevention of Tuberculosis) Regulations, 1925, or under section 62 of the Public Health Act, 1925, in regard to (*a*) cases of tuberculosis in persons engaged in the milk-trade, and (*b*) the compulsory removal to hospital of infectious cases of tuberculosis, respectively. One case in the latter category was reported to the Committee, but as other arrangements were satisfactory, no action was taken.

Incidence of Tuberculosis.

Number of South Shields residents on tuberculosis notification register on 1st January, 1933	1,150
Cases notified during 1933	338
Non-notified fatal cases	22
Posthumous notifications	24
Inward transfers	..
Cases re-admitted to register	14
Cases removed from register during 1933	424

Total number of South Shields residents on register on 31st December, 1933 :—

	Males.	*Females.*	*Total.*
Pulmonary	322	234	556
Non-pulmonary	281	287	568
Total	603	521	1,124

The reasons for removal from the register were :—

Died from tuberculosis or other disease	221
Left the town	37
Two years untraced	24
Three years free (non-pulmonary)	73
Five years free (pulmonary)	52
Wrong diagnosis or withdrawal of notification	17

The following table shows the incidence of tuberculosis in the different wards of the Borough during 1933 :—

Ward.	*No. of Cases.*	*Ward.*	*No. of Cases.*
Shields	23	Westoe	16
Beacon	14	Deans	43
St. Hilda	22	Tyne Dock	40
Hadrian	24	Simonside	16
Holborn	33	West Park	23
Laygate	29	Harton	16
Victoria	28	Unknown	2
Bents	19		
Rekendyke	36	Total	384

Notification.

338 new cases were notified to the Health Department during the year as compared with 359 in 1932. Of these, 232 were tuberculosis of the lungs (133 males and 99 females) and 106 non-pulmonary cases (53 males and 53 females). This represents an increase of 21 in the pulmonary cases and a decrease of 42 in the non-pulmonary.

There were 46 fatal cases of tuberculosis in respect of which no notification had been received before death, including 10 cases of tuberculous meningitis and 7 cases in Arabs. Explanation was asked for from doctors in respect of 8 cases in which there appeared to have been neglect in notification, but the explanation given in each case showed that the doctor had reason to think that the case had been notified. The 46 non-notified or posthumously notified cases equals 22 per cent. of the total deaths from tuberculosis during the year.

Of the 175 notified cases of tuberculosis who died during the year :—

17 died within one week of notification.
26 ,, ,, to one month of notification.
23 ,, one month to three months of notification.
19 ,, three months to six months of notification.
25 ,, six months to twelve months of notification.

There are indications that, on the whole, notification is being made earlier in the disease.

There has been an appreciable decrease in the number of cases of non-pulmonary tuberculosis. During 1933, 129 cases occurred in the Borough of which 23 were not notified. The greater proportion were tuberculous glands and bowels.

The following table shows the parts affected :—

Glands	40
Bowels, mesentery, etc.	41
Meninges	15
Bones and joints	21
Genito-urinary	5
Lupus, etc.	7

The following table shows the number of "new cases" of tuberculosis during 1933, classified according to sex and age groups :—

Age-Group.	New Cases.				Deaths.			
	Respiratory.		Non-Respiratory.		Respiratory.		Non-Respiratory.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	..	3	3	1	..	..	3	1
1—5 years	6	4	16	17	2	1	6	4
5—10 years	10	10	14	9	2	4	4	4
10—15 years	12	15	7	11	2	4	3	4
15—20 years	14	7	10	3	10	7	4	2
20—25 years	18	13	2	7	15	17	3	2
25—35 years	28	25	5	8	25	16	1	1
35—45 years	31	17	7	2	22	10	4	1
45—55 years	20	7	..	1	7	4	..	1
55—65 years	6	6	2	1	5	4	1	..
Over 65 years	1	2	1	2	1	1	1	1
Total	146	109	67	62	91	68	30	21

The term "new cases" includes all the primary notifications (338), and the 46 fatal cases referred to above who had not been notified before death.

The figures for the age groups 25—45 years for males include the deaths of 16 Arabs.

Included in the new cases are 25 Arabs—23 men and 2 boys 16 pulmonary cases and 9 non-pulmonary. They are classified in age groups as follows :—

	Pulmonary.		*Non-Pulmonary.*	
	M.	F.	M.	F.
Under 1 year ..	..	..	1	..
1—5 years	..	..	1	..
25—35 years ..	6	..	3	..
35—45 years ..	10	..	4	..

The total number of cases of tuberculosis notified or ascertained during each of the past ten years is as follows. The table also gives the approximate attack-rate per 1,000 of the population and the number of cases per 100 deaths from tuberculosis :—

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Notified :—										
Pulmonary	276	240	239	273	278	270	268	225	211	232
Non-pulmonary ..	106	162	176	111	184	140	153	172	148	106
Not notified :—										
Pulmonary	18	22	19	11	28	30	17	18	15	23
Non-pulmonary ..	7	9	11	10	13	9	9	14	18	23
Total	407	433	445	405	503	449	447	429	392	384
Attack-rate	3.21	3.48	3.59	3.28	4.13	3.76	3.84	3.76	3.46	3.37
Cases per 100 deaths ..	198	195	201	211	194	193	230	220	180	183

Mortality.

During the year there were 210 deaths from tuberculosis ; 159 pulmonary and 51 non-pulmonary, equal to a death-rate of 1.84 per 1,000 of the population. There were 19 deaths from tuberculosis in Arabs (pulmonary 15, non-pulmonary 4), as under :—

	Pulmonary.		*Non-pulmonary.*	
	Male.	*Female.*	*Male.*	*Female.*
Under 1	..	..	1	..
1—5 ..	..	..	1	..
5—10 ..	..	..	1	..
25—35 ..	4	2	..	..
35—45 ..	9	..	1	..
	13	2	4	..

The death-rate in South Shields from tuberculosis during the past 10 years is as follows :—

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Pulmonary	1.28	1.34	1.16	1.13	1.63	1.41	1.25	1.24	1.46	1.39
Non-pulmonary	.34	.44	.62	.43	.50	.45	.41	.46	.46	.45

The death-rate from tuberculosis in England and Wales during 1933 was 0.82 per 1,000 of the population (pulmonary 0.69, non-pulmonary 0.13).

As a matter of interest, it should be recorded that the unhealthy housing areas dealt with in the past two or three years (Thames Street, Mitre Street, Drake Street, Laygate Square and Holborn) with an approximate total population of 5,000 persons, or about one-twenty-third of the population of the whole town, have in the past 10 years had one-seventh of the total number of tuberculosis deaths in the town in that period.

Treatment of Tuberculosis.

The following is a detailed statement on the treatment of tuberculous patients during 1933 :—

Residential Institution Treatment.—During the year 374 tuberculous patients or suspected cases were known to have been admitted to institutions for treatment. Of these 168 were treated at the cost of the Health Committee (apart from those admitted to poor law hospitals), as follows :—

At Cleadon Park Sanatorium (89 pulmonary, 5 non-pulmonary)	94
At the Ingham Infirmary (surgical cases)	38
At other sanatoria	36

The accommodation at Cleadon Park Sanatorium was, on the average throughout the year, 98 per cent. occupied, an average of 20 men, 21 women, and 3 children. Of the cases treated, the daily average was 42 pulmonary cases and 2 non-pulmonary.

199 patients suffering from tuberculosis were admitted to Harton Hospital during the year. Of these 135 were maintained at the cost of the Health Committee ; the remainder were admitted from the Borough as Poor Law cases. The Health Committee after agreement with the Public Assistance Committee began to send ases to the Hospital on 9th May.

In addition an average of 25 beds (pulmonary 10, non-pulmonary 15) were used throughout the year at the cost of the Health Committee at the Ingham Infirmary and at Stannington, Stanhope, Wolsingham and other sanatoria.

The "waiting list" for the year averaged 4 adults and 8 children, including an average of 4 surgical cases.

The following table shows the number of patients maintained in institutions by the Health Committee (other than those at Harton Hospital) since 1921 :—

1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.	1933.
93	120	125	171	131	141	120	127	144	156	168	160	168

while the average daily number of beds occupied is as follows :—

1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.	1933.
22	32	41	48	49	49	50	50	50	57	63	65	69

The following table shows the distribution and classification of South Shields patients admitted to institutions during 1933 and includes those treated at the expense of the Corporation :—

	Pulmonary.			Non-pulmonary.			Oberva-tion.			Total.
	M.	W.	C.	M.	W.	C.	M.	W.	C.	
Approved Sanatoria, etc.—										
Cleadon Park	36	38	3	..	2	3	2	6	4	94
Stannington	..	..	2	..	1	5	..	..	..	8
Stanhope	2	..	10	1	..	3	..	..	1	17
Wolsingham	..	..	3	..	1	4	..	..	..	8
Ingham Infirmary	..	..	..	9	6	25	1	..	..	41
Royal Victoria Infirmary	1	..	..	..	..	1	..	..	..	2
Other Sanatoria	1	1	..	..	..	..	..	..	..	2
Harton Hospital	70	27	21	27	4	50	..	..	..	199
Other Hospitals	..	1	..	..	..	2	..	..	..	3
Total	110	67	39	37	14	93	3	6	5	374

The total number of individual patients referred to in the above statement is 321. The difference in the total figures is due to the transfer of certain patients from sanatoria to hospitals or *vice versa*.

TREATMENT IN SANATORIA.

97 patients were discharged from Cleadon Park Sanatorium during the year. The average length of stay was 175 days. This includes 12 "observation" cases. If these are deducted the average stay is increased to 192 days, but on account of certain patients being found to be unsuitable and who therefore remained for short periods the average length of stay was considerably longer. Three patients remained in the sanatorium nearly 3 years. 13 patients were discharged from Stanhope Sanatorium after an average stay of 234 days. 6 patients were discharged from Stanington Sanatorium after an average stay of 340 days and 4 from Wolsingham Sanatorium after an average stay of 315 days. 40 cases of non-pulmonary tuberculosis were discharged from the Ingham Infirmary after an average stay of 54 days. The immediate results of treatment of patients discharged from approved sanatoria and hospitals are set out in Table G., page 88. It will be seen that in 60 cases of pulmonary tuberculosis, the disease became quiescent and 23 were discharged as "not quiescent," while in 50 cases of non-pulmonary tuberculosis the disease became quiescent and 8 were discharged as "not quiescent."

The following is Dr. Gaspey's report on the work of the Cleadon Park Sanatorium during 1933 :—

"During 1933, 94 patients were admitted to Cleadon Park Sanatorium, and 97 discharged. As far as possible, only patients who, from physical signs and general condition appeared to have a good chance of recovery, were admitted. With 10 exceptions, all cases were adults, as children are now provided for at Stanhope and Wolsingham, and, as formerly, at Stannington. Routine treatment consisted mainly of short walks and rest. A few men did some light work, such as making mats or stools, but unfortunately, there is only a very limited outlet for the finished articles. Some of the female patients made cork beaded mats, and knitted fancy goods.

As far as special treatment is concerned, we are now beginning to see the fruits of the policy which provided such modern facilities as an efficient X-Ray plant, to supervise and visualise the results achieved by artificial pneumothorax, gold salts, etc.

I have been able to select more accurately by having clinical findings confirmed by X-Ray films, and have thus been able to eliminate cases that would in all probability have given poor results. I have endeavoured to persuade patients with relatively early and limited lesions to avail themselves of sanatorium treatment, and, in many cases, have attempted artificial pneumothorax. On the whole, this has been followed by good results. Artificial pneumothorax was induced this year in 26 cases : 10 men and 16 women. I found, in practice, that women were generally more keen to submit to this form of treatment and were, on the whole, better and more obedient patients than the men.

In six cases it was unfortunately not possible to induce artificial pneumothorax, and other forms of treatment had to be resorted to.

The twenty remaining cases necessitated 378 refills, to which must be added 168 refills of patients whose initial induction dated back to 1932 or 1931. This gives a grand total of 546 refills.

In eleven cases patients were allowed to return to their homes and came up for refills at regular intervals.

Nine cases were treated by crisalbine, giving a total of 147 injections. In most cases small doses were given once or twice weekly, rarely above 0.25 gramme, as previously patients had not responded well to the larger doses.

Five cases were treated by artificial pneumothorax in combination with crisalbine, and here the results have been very satisfactory. Patients were on almost complete rest, or allowed up for a very short while. They all gained weight, the sputum diminished, as also did the cough, and the general condition seemed to improve rapidly. In four out of five cases, the sputum became negative and there was a very marked improvement in physical signs, as well as in X-Ray appearance. One of these cases, admitted in 1931, with fairly advanced disease of the right lung with cavitation, was discharged during the year completely cured and fit to resume work. One case is being treated by double artificial pneumothorax, and had also a second course of crisalbine. In this case the right lung is now completely healed and there is a very decided improvement on the left side. His general condition is excellent, and he is gaining weight steadily.

One patient was treated by artificial pneumothorax and solganal B. oleosum.

A most interesting result was obtained in the case of a female patient treated by injections of crisalbine, in so far that the disease was completely arrested and the patient showed a gain of 4 stones 2 lbs. in eight months, the weight chart showing an uninterrupted steady rise, and the sputum becoming negative.

Three patients were temporarily transferred to Harton Hospital for phrenic evulsion; one man and two women. In all cases a good result was obtained, showing the diaphragm to be paralysed.''

After Care.

The South Shields Council for Social Service continued to undertake the after-care of patients discharged from sanatoria during the year.

Tuberculosis Clinic.

It will be seen from Table A., page 82, that 339 new cases were examined during the year of whom 159 were definitely tuberculous, and 171 not tuberculous, while in 9 cases the diagnosis had not been established at the end of the year. In addition 526 persons who had been in contact with cases of tuberculosis were examined. Of these, 80 or 15 per cent. were found to be tuberculous. In the previous year 315 contacts were examined, of whom 54 were tuberculous. Much more attention is being paid at the clinic to the examination of contacts and in this way hitherto unrecognised or early cases are being brought under supervision.

120 names were removed from the dispensary register as having recovered, that is having been 5 years free from the disease in the case of pulmonary or 3 years free in non-pulmonary cases. 128 cases were written off the register as having died from any cause, not necessarily from tuberculosis.

The Health Visitors paid 4,267 visits to the homes of tuberculous patients during the year. Of these 3,207 visits were for ''dispensary purposes.''

Surgical appliances—boots, splints and crutches—were supplied to 14 patients. 543 surgical dressings for 164 patients were applied at the clinic and 4,331 dressings were given to patients. 93 patients received extra nourishment, and 13 were recommended to the Public Assistance Committee.

ULTRA VIOLET RAY TREATMENT.

72 patients, mainly suffering from tuberculous glands and lupus, made 2,864 attendances for treatment by the ultra violet rays. 27 were cases recommended during 1933 and 45 those whose treatment began previously.

TREATMENT OF TUBERCULOSIS.

(A.) Return showing the work of the Dispensary during the year 1933.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY.				TOTAL.				GRAND TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—NEW CASES examined during the year (excluding contacts) :—													
(*a*) Definitely tuberculous	57	23	10	16	13	10	17	13	70	33	27	29	159
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	2	2	3	2	9
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	39	48	46	38	171
B.—CONTACTS examined during the year :													
(*a*) Definitely tuberculous	22	18	8	6	2	3	11	10	24	21	19	16	80
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	1	..	2	..	3
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	55	104	129	155	443
C.—CASES written off the Dispensary Register as :—													
(*a*) Recovered	19	20	8	7	7	14	25	20	26	34	33	27	120
(*b*) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous)	..	..	..	..	..	..	..	..	100	157	178	198	633
D.—NUMBER OF CASES on Dispensary Register on December 31st :—													
(*a*) Definitely tuberculous	166	108	92	82	66	61	191	172	232	169	283	254	938
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	3	2	5	2	12

1. Number of cases on Dispensary Register on January 1st	1015	2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years	Nil.
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases " lost sight of "	49	4. Cases written off during the year as Dead (all causes)	128
5. Number of attendances at the Dispensary (including Contacts)	7,886	6. Number of Insured Persons under Domiciliary Treatment on the 31st December	169
7. Number of consultations with medical practitioners :— (*a*) Personal (*b*) Other	 4 241	8. Number of visits by Tuberculosis Officers to homes (including personal consultations)	39
9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes	3,207	10. Number of :— (*a*) Specimens of sputum, etc., examined (*b*) X-ray examinations made in connexion with Dispensary work	 375 899
11. Number of " Recovered " cases restored to Dispensary Register, and included in A(*a*) and A(*b*) above	3	12. Number of " T.B. plus " cases on Dispensary Register on December 31st	215

(**B.**) **Number of Dispensaries for the treatment of Tuberculosis (excluding centres used only for special forms of treatment)**

Provided by the Council .... One.
Provided by Voluntary Bodies .... Nil.

TUBERCULOSIS SCHEME—(CONTINUED).

(C.) Number of beds available for the treatment of Tuberculosis on the 31st Dec., in Institutions belonging to the Council.

NAME OF INSTITUTION.	FOR PULMONARY CASES.		FOR NON-PULMONARY CASES.		TOTAL.
	Adults.	Children under 15.	Adults.	Children under 15.	
Cleadon Park Sanatorium	35	10	..	..	45
Harton Public Assistance Institution................	46	14	General	Wards.	60

TUBERCULOSIS SCHEME—(CONTINUED).

(D.) Return showing the extent of Residential Treatment and Observation during the year in Institutions (other than Poor Law Institutions) approved for the treatment of Tuberculosis.

		In Institutions on Jan. 1st.	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31st.
Number of doubtfully tuberculous cases admitted for observation.	Adult males ..	1	3	4	..	..
	Adult females..	1	7	8	..	..
	Children	3	7	7	..	3
	Total	5	17	19	..	3
Number of definitely tuberculous patients admitted for treatment.	Adult males ..	22	50	47	..	25
	Adult females..	23	47	46	1	23
	Children	18	54	48	..	24
	Total	63	151	141	1	72
GRAND TOTAL		68	168	160	1	75

TUBERCULOSIS SCHEME—(CONTINUED).

(E.) Return showing the extent of Residential Treatment provided during the year in Poor Law Institutions for persons chargeable to the Council.

		In Institutions on Jan. 1st	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31st.
Number of patients suffering from pulmonary tuberculosis admitted for treatment.	Adult males ..	21	70	47	27	17
	Adult females..	3	27	15	5	10
	Children	4	21	10	8	7
	Total	28	118	72	40	34
Number of patients suffering from non-pulmonary tuberculosis admitted for treatment.	Adult males ..	6	27	20	5	8
	Adult females..	2	4	4	..	2
	Children	5	50	43	5	7
	Total	13	81	67	10	17
GRAND TOTAL		41	199	139	50	51

TUBERCULOSIS SCHEME—(CONTINUED).

(F.) Return showing the results of observation of doubtfully tuberculous cases discharged during the year from Institutions approved for the treatment of Tuberculosis.

Diagnosis on discharge from observation.	For Pulmonary Tuberculosis.						For Non-Pulmonary Tuberculosis.						Totals.		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.
Tuberculous	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Non-tuberculous	1	4	2	3	4	4	..	..	..	..	..	..	4	8	6
Doubtful	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS	1	4	2	3	4	5	..	..	..	..	..	..	4	8	7

TUBERCULOSIS SCHEME—(CONTINUED).

(G.) Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year from Institutions approved for the treatment of Tuberculosis.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.															Grand Totals.
			Under 3 months.			3—6 months.			6—12 months.			More than 12 months.			Totals.			
			M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent	2	3	2	1	1	1	..	..	..	..	1	2	3	5	5	13
		Not quiescent	2	2	..	..	..	..	..	..	..	..	..	..	2	2	..	4
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus Group I.	Quiescent	..	1	..	1	..	1	2	1	..	..	1	..	3	3	1	7
		Not quiescent	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus Group II.	Quiescent	3	3	..	4	4	2	9	4	1	2	2	..	18	13	3	34
		Not quiescent	3	4	..	..	1	..	..	1	..	..	..	..	3	6	..	9
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus Group III.	Quiescent	1	..	..	1	1	..	1	1	..	..	1	..	3	3	..	6
		Not quiescent	1	1	1	1	2	..	1	2	..	..	..	..	3	5	1	9
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS...........		PULMONARY	12	14	3	8	10	4	13	9	1	2	5	2	35	38	10	83

TUBERCULOSIS SCHEME.—(G).—CONTINUED.

Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year from Institutions approved for the treatment of Tuberculosis.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.															Grand Totals.
			Under 3 months.			3—6 months.			6—12 months.			More than 12 months.			Totals.			
			M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent	..	..	..	..	1	3	..	..	2	..	..	3	..	1	8	9
		Not quiescent	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Abdominal.	Quiescent	..	1	1	..	..	3	..	..	2	..	1	..	..	2	6	8
		Not quiescent	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
		Died in Institution	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
	Other Organs.	Quiescent	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1
		Not quiescent	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Peripheral glands.	Quiescent	7	3	17	2	1	2	..	..	..	..	..	..	9	4	19	32
		Not quiescent	2	..	3	..	..	..	..	..	..	..	..	..	2	..	3	5
		Died in Institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS..		NON-PULMONARY	9	6	23	3	2	8	..	..	4	..	1	3	12	9	38	59

VENEREAL DISEASES.

There were no changes in the personnel of the Venereal Diseases Treatment Centre during 1933.

There was a decrease in the number of new cases and in the total attendances particularly for intermediate treatment. In the later months of the year there was an increased attendance among females.

The number of attendances by non-residents has again decreased.

The following tabulated statements show in detail the work of the clinic for the year.

Comparative Statement of New Cases treated at the Municipal V.D. Clinic during the past Eleven Years.

	1923	1924	1925	1926	1927	1928	1929	1930	* 1931	1932	1933
Syphilis :											
Residents	86	95	79	137	67	98	52	83	38	87	70
Non-residents ..	150	98	48	129	95	77	83	66	33	41	45
Soft chancre :											
Residents	5	16	8	21	10	4	13	13	12	10	10
Non-residents ..	17	7	2	10	15	4	18	30	9	6	10
Gonorrhoea :											
Residents	158	159	164	119	106	178	129	197	180	200	160
Non-residents ..	219	165	86	194	143	112	139	99	79	67	61
Total venereal cases:											
Residents	249	270	251	277	183	280	194	293	230	297	240
Non-residents ..	386	270	136	333	253	193	240	195	121	114	116
Non-venereal cases :											
Residents	99	119	85	198	162	181	167	170	175	220	182
Non-residents ..	47	62	33	78	82	89	112	108	68	63	43
Grand Total ..	781	721	505	886	680	743	713	766	594	694	581

*As explained in my annual report for 1931, the number of "new cases" in that year is not comparable with previous years. For 1931, cases that were dealt with at the clinic for the first time who were known to have received treatment at other Centres for the same infection were excluded from the total of "new cases."

Previously they were included. If such cases had been included in the 1931 figures the number of new cases would have been as under :—

Syphilis	114	instead of	71
Soft chancre	 24	,,	21
Gonorrhoea	283	,,	259
Non-venereal	249	,,	243
Total	670	,,	594

COMPARATIVE STATEMENT OF ATTENDANCES.

Year.	Residents.	Non-residents.	Total.	Male.	Female.
1923	16,876	5,425	22,301	19,564	2,737
1924	13,937	5,148	19,085	14,640	4,445
1925	12,341	3,845	16,186	12,743	3,443
1926	34,089	9,484	43,573	35,862	7,711
1927	13,096	3,901	16,997	12,837	4,160
1928	12,156	2,845	15,001	11,084	3,917
1929	10,860	3,097	13,957	10,393	3,564
1930	16,248	4,053	20,337	14,854	5,483
1931	17,778	2,799	20,577	16,644	3,933
1932	20,830	1,462	22,292	18,182	4,110
1933	17,821	1,317	19,138	15,115	4,023

Table (*a*) summarises the new cases attending during 1933, and Table (*b*) is an analysis of the attendances.

(*a*) CASES TREATED AT SOUTH SHIELDS CLINIC DURING 1933.

	NEW CASES.		NEW CASES FROM OTHER CENTRES.		TOTAL CASES *	
	Male.	Female.	Male.	Female.	Male.	Female.
Syphilis	68	17	29	1	239	77
Soft chancre ..	20	..	..	..	29	..
Gonorrhoea	173	26	22	..	275	56
Non-venereal diseases ..	194	29	2	..	239	45
Total	455	72	53	1	782	178

* Includes those in attendance from the previous year.

(*b*) TOTAL ATTENDANCES AT THE CLINIC DURING 1933.

	Males.		Females.		Total.		Average Attendance per patient.	
	M.O.	Others.	M.O.	Others.	M.O.	Others.	Male.	Female.
Syphilis	3,213	..	1,487	..	4,700	..	13.4	19.3
Soft chancre	70	..	..	..	70	..	2.4	..
Gonorrhoea	1,986	9,396	269	2,184	2,255	11,580	41.4	43.8
Non-vener'l diseases ..	450	..	83	..	533	..	1.9	1.8
Total	5,719	9,396	1,839	2,184	7,558	11,580	19.3	22.6

Non-residents made 1,317 attendances at the clinic during 1933, as follows :—

From 10 Counties in England and Wales	693
,, 8 County Boroughs	332
,, Scotland	130
,, Northern Ireland	6
,, Irish Free State	..
,, 2 Colonies and Dependencies	15
,, 13 foreign countries	141

Table (*c*) indicates the disposal of cases during the year.

(*c*) DISPOSAL OF CASES.

	Syphilis.		Soft chancre		Gonorrhoea.	
	M.	F.	M.	F.	M.	F.
Ceased attendance : (*a*) Before completion of treatment	57	13	2	..	61	16
(*b*) After completion of treatment, but before final tests of cure	6	4	3	..	7	1
Transferred to other centres or to private practitioners ..	73	5	6	..	27	1
Discharged after completion of treatment and final tests of cure	10	1	8	..	120	21
Under treatment 31st Dec., 1933....................	93	54	10	..	60	17

In-patient Treatment.

It was not found necessary to admit a patient to the wards during the year.

Arsenobenzene Compounds.

2,574 doses of these compounds were administered to patients at the clinic. In addition 323 doses were supplied to 7 medical practitioners.

Pathological Examinations.

442 examinations of pathological material were made at the clinic. The following table shows the number of specimens from South Shields residents examined at the College of Medicine. The figures include specimens sent by other clinics and hospitals, and those sent by 11 private practitioners, 7 of whom were South Shields doctors.

Source of Material.	Nature of Examination.		
	Wassermann Re-actions.	Micro-scopical.	General C.S.F. Exam.
South Shields V.D. Clinic	629	..	4
Newcastle V.D. Clinic	46	..	..
Tynemouth V.D. Clinic	8	..	..
Sunderland V.D. Clinic	..	..	..
Harton Hospital, South Shields	45	..	..
Ingham Infirmary, South Shields	15	..	..
Royal Victoria Infirmary, Newcastle	27	..	..
Fleming Hospital, Newcastle	1	..	..
Nose and Throat Hospital, Newcastle	1	..	..
Eye Hospital, Newcastle	4	..	..
Princess Mary Maternity Hospital, Newcastle	1	..	..
Private practitioners	40	2	..
Total	*817	2	4

* Includes 11 specimens of cerebro-spinal fluid.

In addition there were 2 specimens of cerebro-spinal fluid subjected to the gold test and one for gonococcal fixation test.

South Shields Cases treated at other Centres.

The following table shows the number of South Shields residents treated at other centres.

	Newcastle.	Tynemouth.	Sunderland.	West Hartlepool.	Wallasey.	Seamen's Hospital, Greenwich.	Total.
(*a*) Number of cases dealt with during the year for the time first and found to be suffering from :—							
Syphilis	3	2	3	..	..	5	13
Soft chancre	..	..	..	..	..	..	..
Gonorrhoea	3	1	4	1	1	5	15
Non-venereal diseases	6	1	1	..	..	3	11
(*b*) Total attendances at out-patient clinic	349	76	144	1	43	134	747
(*c*) Aggregate number of "In-patient Days"	..	..	20	..	..	66	86
(*d*) No. of doses of arseno-benzene compounds given in the Out-patient Clinic and In-patient Department	68	31	16	..	..	9	124

MATERNITY AND CHILD WELFARE.

Notification of Births.

The number of births reported to the Health Department during 1933 was 1,992 as follows :—

(*a*) Notified under the Notification of Births Acts :	
By midwives	1,163
,, doctors	297
,, relatives and others	100
	1,560
(*b*) Reported by local Registrars (not previously notified)	432
	1,992

Approximately 78 per cent. of the total live births were notified. This total (1,992) is exclusive of 98 still births, 50 of which were notified by midwives, 14 by doctors, 1 by a relative, and 33 which had not been previously notified and were reported by the Registrars. The proportion of still births to live births was 4.9 per cent. as compared with 3.8 per cent. in 1932, 3.8 per cent. in 1931, and 4.1 per cent. in 1930.

Infant Mortality.

There were 182 deaths among infants under one year, or an infant mortality rate of 93 per 1,000 births. The corresponding rate for 1932 was 70 per 1,000. The increase is due to a larger number of deaths from gastro-intestinal disorders, probably on account of the hot summer, and to an increase in the number due to pneumonia, whooping cough and measles.

Of the 182 deaths, 107 occurred among boys and 75 among girls, an infant mortality rate of 105 and 80 per 1,000 births respectively.

Neo- natal deaths, or deaths occurring in the first month of life, numbered 79 or 40 per 1,000 births.

Deaths among illegitimate children numbered 7 out of 89 illegitimate births or a rate of 79 per 1,000 as compared with a rate of 93 among legitimate children.

It is somewhat unusual to find the death rate among illegitimate infants lower than that of the legitimate.

The mortality rate among infants in each quarter was :

1st quarter	126	per 1,000 births.
2nd ,,	78	,,
3rd ,,	88	,,
4th ,,	74	,,

The principal causes of deaths in infants were :

Ante-natal	Prematurity	41
	Debility	15
	Malformations, atelectasis, birth injuries, etc.	20
		76
Post-natal	Pneumonia	25
	Bronchitis	7
	Convulsions	19
	Whooping cough	11
	Measles	6
	Gastro-intestinal disorders	27
	Tuberculosis	4
	Other causes	7
		106

Maternal Mortality.

During 1933, 11 mothers died as a result of pregnancy. For every 178 live births (or 187 total births) one mother lost her life as compared with 1 in 217 in 1932, and 1 in 197 in 1931. The maternal death rate during 1933 was 5.61 per 1,000 live births or 5.35 per 1,000 total births as compared with a rate of 4.51 per 1,000 live births or 4.32 per 1,000 total births for England and Wales.

Analysis of the causes of death—

Puerperal sepsis	3
Ectopic gestation	1
Puerperal haemorrhage	1
Phlegmasia alba dolens	1
Albuminuria and eclampsia	2
Other accidents of childbirth	3

Of the 11 deaths 7 occurred in hospitals :

Age at death :

20—25 years	4
25—30 ,,	2
30—35 ,,	1
35—40 ,,	2
40—45 ,,	2

Another death from hyperemesis gravidarum associated with diabetes was classified to the latter heading, and another certified by the Coroner after inquest as " debility due to secondary anaemia and toxic absorption due to abortion " was classified as due to violence.

Of the maternal deaths due to pregnancy, probably at least six might be regarded as being preventable.

Inspection of Midwives.

During 1933, 29 midwives notified their intention to practise, including five who lived in the administrative County of Durham.

All are trained midwives. 1,022 (or 50 per cent.) of the total births in the town were attended by midwives, apart from 188 cases in which the midwife acted as maternity nurse.

Four midwives had no cases during the year.

7 midwives had 1—10 cases each.
6 ,, 11— 25 ,,
4 ,, 26— 50 ,,
4 ,, 51—100 ,,
2 ,, 101—150 ,,
1 midwife had 167 cases.
1 ,, 188 ,,

These figures include still births.

There were 5 temporary suspensions of midwives from practice on account of infection, and 19 changes of address were notified to the Central Midwives Board. On the whole the midwives conducted their practices without any serious errors of omission or commission. It was unnecessary to issue a formal caution in any instance. One woman, not a certified midwife, who was suspected of carrying on unqualified practice was interviewed, and although definite evidence could not be obtained, she was warned of the penalties of carrying on such a practice.

The Inspector of Midwives paid 52 routine and 23 special visits to the homes of midwives to insect their records, appliances, etc., and had 21 interviews with midwives at the Health Department.

Towards the end of the year the Council agreed to pay the midwives' fees of £1 1s. 0d. for each case (12/6d. in the case of abortion) among insured persons where maternity benefit had ceased, and who could not otherwise pay the midwife's fee. It was suggested by the Ministry of Health that the fees be paid in all necessitous cases but the Council were unable to accede to the Ministry's request. It is to be regretted that this decision should have been necessary as such a scheme would go far in eliminating the "handy woman" who can be a potential source of danger when in attendance at confinements.

The following is a report made to me by the Inspector of Midwives :—

"I am pleased to record my appreciation of the work of the practising midwives in the Borough during the past year.

There were no cases reported to the Central Midwives Board and no serious cases of negligence. This I attribute in a great measure to the influence of the Branch of the Association of Midwives, now existing in South Shields ; with one or two exceptions all the midwives are members.

Through the kindness of the Health Committee the use of a clinic room is granted one evening each month. This privilege is much appreciated, the meetings there being well attended.

Lectures have been given by lecturers from headquarters of the Association. Several medical practitioners in the town also have been good enough to give lectures. They were all very instructive and were well attended and much appreciated.

The payment of midwives' fees by the Maternity an Child Welfare Committee in necessitous cases will I am sure prove to be money well spent. The loyalty of the midwives to the Local Supervising Authority is unquestionable, and the standard of their work will compare most favourably with other County Boroughs.

I find the midwives ready to follow any suggestions for the improvement of their work, and willing to assist each other."

Notifications from Midwives.

The following notifications were received at the Health Department during the year :

Sending for medical help	332	(333 causes).
Still-birth notifications	21	
Deaths of infants	26	
Deaths of mothers	2	
Laying out of dead bodies	—	
Artificial feeding	17	
Infectious cases	19	
Intention to practise	29	

The causes for which medical help was called numbered 333 : of these 269 were due to abnormalities in the mother and 64 in the infant.

In the case of mothers the chief causes were :

Delayed labour and mal-presentations	121
Abortion (or threatened)	10
Haemorrhage and placenta praevia	22
Perineal rupture	51
Increased pulse or temperature	13
Albuminuria, fits and oedema	14
Retained or adherent placenta	10
Other conditions	28

In the case of the infant the chief causes were :

Feebleness and prematurity	18
Inflamed eyes	11
Rash	8
Still birth	2
Jaundice	3
Malformations	3
Fits	5
Other conditions	14

During the year, doctors who had been called in by midwives rendered accounts to the Local Supervising Authority in 270 cases for fees amounting to £387. The authority decided to recover £85 from 66 cases. The amount actually recovered during the year was £41.

Registration of Maternity Homes.

There are three registered maternity homes in the Borough. The registration of two of those existing at the end of 1932 was cancelled and one additional home became registered.

There is accommodation in the three homes for 11 patients, and in addition there are 11 beds at Harton Hospital and a varying number in the Ingham Infirmary.

There were no deaths of infants or mothers in registered maternity homes during the year.

The Inspector of Midwives paid 10 visits of inspection to the homes.

The number of births reported in maternity homes and hospitals in the Borough during 1933 was as follows :—

	Residents.		Non-Residents.	
	Live Births.	Still Births.	Live Births.	Still Births.
Harton Hospital	41	3	15	6
Ingham Infirmary	20	3	..	..
Registered Maternity Homes	26	2	2	..
Total	87	8	17	6

Municipal Infant Welfare Centres.

There has been an increased use made of the Centres. The total number of attendances had greatly increased, particularly attendances made by expectant mothers and children of from 1—5 years.

Certain alterations were made to the Stanhope Road Centre by which the waiting-room accommodation has been increased, but on account of the rooms being also used by the school medical service the maternity and child welfare work has been handicapped. It is hoped that new premises will be available for the school medical service before the end of the present year.

The following table is a detailed summary of the attendances

	Stanhope Road.	Tyne Dock.	Queen Street.	Total 1933.	Total 1932.
No. of children who attended at the clinics for the *first time* during the year :					
Children under 1 year of age	692	268	199	1,159	1,205
Children 1—5 years of age	288	226	178	692	531
Total no. of expectant mothers who attended during the year	583	. .	. .	583	470
Total no. of attendances made :					
By children under 1 year	7,809	3,377	2,196	13,382	13,064
By children 1—5 years. .	4,943	2,234	1,541	8,718	6,411
By nursing mothers	253	111	263	627	442
By expectant mothers. .	1,665	. .	. .	1,665	1,150
Average attendance per session :					
*Afternoon sessions	88	86	59	73	77
*Morning sessions.	. .	24	15	19	. .
Expectant mothers at evening clinics	17	. .	. .	17	. . 25

* Babies and children only.

The following is a report made to me by Dr. Dorothy Blair on the work of the maternity and child welfare clinics during the year :—

Infant Welfare Clinics.

"MUNICIPAL CLINIC :

The sessions at this clinic were held on Monday, Tuesday and Wednesday afternoons, and there were 145 sessions during the year. Many toddlers attended as well as infants, as it has not been found possible to hold special sessions for toddlers. The work was handicapped as in previous years by the large number of children and mothers attending the clinics, thus preventing much necessary teaching and prophylactic work. The great majority of mothers value the advice given and follow instructions well. Many seek dental treatment for children about four years old ; a special dental session is necessary for these cases, as many septic mouths are seen, and the parents seem anxious to have children of that age treated. It would be advisable also to have treatment for children with squint, as early cases could be cured before school age ; at present parents are generally unable to afford the cost of the glasses prescribed at the hospitals. Cases of deafness due to ear disease are rarely seen at the infant clinics ; cases of otorrhoea are treated and children suffering from deafness due to adenoids are referred to hospital.

ST. MARY'S CLINIC :

The session for infants was held on Friday afternoons and for toddlers on Tuesday mornings. There were 52 infant sessions and 48 toddlers sessions during the year. The infant clinic was most satisfactory, but the number attending is too great. The number of toddlers attending is also increasing, and the mothers attend regularly with their children. At the same time many toddlers are seen at the infant sessions along with the younger children.

QUEEN STREET CLINIC :

The sessions for infants were held on Thursday afternoons and for toddlers on Friday mornings. There were 51 infant sessions and 50 toddlers sessions during the year. The attendance at clinics was satisfactory, but the number attending the toddlers clinic is still small. This is due partly to the clearing of the nearby slum areas and partly to the fact that many toddlers attend at the infant session with a younger child.

ARTIFICIAL LIGHT TREATMENT :

The results of this treatment were very disappointing as the patients attended so irregularly that improvement was impossible. In all 117 cases from the infant welfare clinics attended and of these one died, five were discharged as cured and eleven were still attending at the end of the year. In those cases where attendance was regular the progress was excellent. The other cases either discontinued of their own accord or attended so irregularly as to render the treatment valueless. Twenty-six cases put in less than 6 attendances and 7 less than twelve. The total attendances during 1933 of child welfare cases at the Harton Hospital artificial light treatment centre numbered 2,481.

THE CONVALESCENT HOME :

The convalescent home became available for the reception of children under school age on April 24th ; between that time and the end of the year forty children were admitted. Two of these were removed by the parents after less than a week in the home, and the other 38 remained for three weeks or more. The results were excellent and the children improved wonderfully in weight and health.

THE ANTE-NATAL CLINIC :

Sessions were held on Monday and Wednesday evenings; there were 97 sessions during the year.

No. of new names on Register during 1933 :	
Expectant mothers	443
Non-pregnant	94
	537
No. of cases brought forward from 1932	46
No. of subsequent visits	1,082
	1,665

BIRTHS.

Midwives' cases	237
,, ,, and doctor called in	53
Doctors' cases	114
Harton Hospital	22
Ingham Infirmary	8
Princess Mary Maternity Hospital	4
Still births	13
Premature births	14
Miscarriages	3
Left town	3
Cannot trace	9

Of the above midwives' cases :—
213 were normal deliveries.
24 were instrumental deliveries.
7 were premature births.
7 were still births.

Of the doctors' cases :—
50 were normal deliveries.
64 were instrumental deliveries.
5 were premature births.
6 were still births.
2 were miscarriages.

Of the hospital cases :—
17 were normal deliveries.
8 were instrumental deliveries.
7 were Caesarean section.
2 were induced labour.
1 was miscarriage.

The names of 137 expectant mothers remain on the register to be carried forward to 1934.

There were four maternal deaths among clinic mothers. The causes were :—

1. Influenza following birth of child.
2. Cardiac failure, septic myocarditis, septicaemia and pelvic peritonitis.
3. Uraemic convulsions due to cardiac and renal conditions. This was an older patient who persistently refused advice.
4. Hyperemesis gravidarum. This patient was very weak and ill when she came to the clinic. She was removed to hospital.

There were sixteen infant deaths :

3	died on day of birth	Debility, 2 ; Defective vitality, 1.
4	,, under 4 weeks old	Convulsions, 2 ; Haematemesis, 1; Hydrocephalus, 1.
1	,, one to three months	Bronchitis.
3	,, three to six months	Convulsions, 2 ; Cardiac failure, 1.
2	,, six to nine months	Pneumonia, 1 ; Cachexia, 1.
3	,, nine to twelve months	Pneumonia, 2 ; Bronchitis, 1.

Defects of Mothers attending Ante-Natal Clinic :

Ante-Natal :

Dental caries	78
Pyorrhoea	14
Digestive disorders	9
Cystitis	1
Respiratory diseases	38
Cardiac diseases	8
Varicose veins	50
Oedema	10
Anaemia	17
Albuminuria	87
Haematuria	1
Vaginitis	2
Prolapsus uteri	2
Contracted pelvis	1
Referred to V.D. Clinic	1
Referred to Tuberculosis Clinic	1
Cervical adenitis	1
Hernia	1
Goitre	1

Post-Natal :

Digestive disorders	1
Anaemia	2
Albuminuria	1

Of the 94 non-pregnant women who attended the clinic, 35 sought advice regarding suspected pregnancy. Seven were suffering from anaemia, four from respiratory conditions, three from nephritis, three from rheumatism, two from digestive disorders, one from heart disease, one from varicose veins, one from haemorrhoids and one from facial paralysis. The remainder were suffering from gynaecological conditions."

Home Visiting and Clinic Sessions.

The following table summarises the visits of the Health Visitors in relation to the Council's Maternity and Child Welfare Scheme. Visits in connection with tuberculosis, the school medical service and regarding non-notifiable infectious diseases are referred to in the respective sections of this report, or in my annual report as School Medical Officer.

No. of visits paid : first visits (after notification of birth)	2,001
,, ,, ,, subsequent visits : infants under 1	7,321
,, ,, ,, ,, ,, children 1—5 years	4,827
,, children breast fed (at first visit)	about 94 per cent.
,, visits *re* still births	97
,, ,, *re* infant deaths	105
,, ,, *re* cases of puerperal fever	4
,, ,, to expectant mothers : first visits	701
subsequent visits	127
,, ,, *re* applications for free milk	1,433
,, ,, *re* midwifery emergency cases	273
Other visits	97

These visits by the health visitors are of great value not only from an educational point of view but in supplementing the advice and treatment given at the clinics.

The Health Visitors attended the under-mentioned clinic sessions :—

Infant and child welfare clinics	916 sessions.
Ante-natal clinics	189 ,,

apart from attendances at the tuberculosis dispensary and school clinics and venereal diseases clinics.

Puerperal Fever and Pyrexia.

Two cases of puerperal fever and 11 cases of puerperal pyrexia were notified during 1933. In addition there was one death from septic myocarditis and pelvic abscess which had not been previously notified.

Seven of the cases, including two non-residents, were removed to hospital. One of the cases of puerperal fever and one of pyrexia died : the latter death was certified as being due to puerperal pyaemia.

The case rate for puerperal fever and pyrexia was 6.8 per 1,000 total births as compared with a rate of 13.1 per 1,000 for England and Wales.

Ophthalmia Neonatorum.

Ten cases of ophthalmia neonatorum were notified, five of which occurred in the practices of midwives. One was treated in hospital and one at the venereal diseases clinic, where the mother was also under treatment. In addition there were eight notifications of " discharging eyes " from midwives, but these were not subsequently notified as ophthalmia neonatorum.

There was no impairment of vision in any case.

Home Nursing.

Two cases of puerperal pyrexia, 1 case of ophthalmia neonatorum, 1 case of whooping cough and 6 cases of measles were referred to the local District Nursing Association at the cost of the Maternity and Child Welfare Committee, apart from other diseases nursed at home by the district nurses at the cost of the Health Committee.

Infant Life Protection.

During the year three names were added to the register and two were removed, one to the custody of his father and another to a foster parent in another area. At the end of the year there were seven names on the register in six registered homes. 41 visits were paid by the Health Visitors to the homes of these children who appeared to be well cared for.

Convalescent Home.

At the children's Convalescent Home which is under the supervision of the Matron of the Public Assistance Committee's Cottage

Homes, there are 24 beds and 4 cots for children whose condition would be likely to benefit by a stay in the country. 40 children were admitted to the home at the cost of the Maternity and Child Welfare Committee. The cost is recoverable from those liable for their maintenance according to the scale adopted by the Committee, but as the family income was in every case below the " necessitous level " the cost was not recovered in any case.

Assisted Milk Scheme.

1,399 applications for milk, including 725 from expectant mothers, were granted during the year. 278 were re-applications, the former applications having lapsed or having been cancelled.

The quantities of milk distributed were as follows :—

Dried milk given free or at a price below cost	50,962 lbs.
Fresh ,, ,, ,, ,,	188 gals.
Dried milk sold at a price slightly above cost	13,462 lbs.

The gross cost of the assisted milk scheme for the year 1933 was £2,405.

The amount distributed weekly amounted to an average of 1,010 lbs. until about the middle of April. There was a slight fall to 990 lbs. about the middle of July, the amount further fell to 890 lbs. for about a month, but rose again steadily to an average of 950 lbs. during the last quarter of the year.

In the case of an applicant who had not given a correct statement of income, the Town Clerk, on the instructions of the Committee sent a letter of caution.

There can be no doubt that but for the supply of milk to necessitous mothers and children their health would suffer, for many infants would be given unsuitable food producing gastro-intestinal disorders and malnutrition.

As to the question as to whether dried milk is as good for infants as fresh milk it is mostly a matter of expediency. Fresh milk contains probably a greater amount of vitamin, but any reduction in this in dried milk can be made up in other ways. Unfortunately in a great many homes fresh milk would not keep, and there would be the risk of producing infantile diarrhoea among infants. It should be remembered that supplies of dried milk are distributed in South Shields within two or three days of milking, that there is less likelihood of the other members of the family being given the milk, and that analyses are made to ensure that the milk is up to standard.

TABLE 10.—DEATHS DURING 1933 OF INFANTS UNDER ONE YEAR: CAUSES AND AGES.

CAUSES OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	1-3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	Total Deaths under 1 Year.
All Causes:	Certified	52	6	10	5	73	26	26	27	19	171
	Uncertified	4	..	1	1	6	..	3	1	1	11
Smallpox		..	..	..	..	..	..	..	..	..	..
Chickenpox		..	..	..	..	..	..	..	..	..	..
Measles		..	..	..	..	..	1	..	1	4	6
Scarlet fever		..	..	..	..	..	..	..	..	..	..
Whooping cough		..	..	..	..	..	2	3	2	4	11
Diphtheria and croup		..	..	..	..	..	..	..	..	..	..
Erysipelas		..	..	..	..	..	..	..	..	..	..
Tuberculous meningitis		..	..	..	..	..	..	..	1	..	1
Abdominal tuberculosis		..	..	..	..	..	1	..	1	..	2
Other tuberculous diseases		..	..	..	..	..	..	..	..	1	1
Meningitis (*not tuberculous*)		..	..	..	..	..	..	..	..	..	..
Convulsions		5	3	..	2	10	2	5	2	..	19
Laryngitis		..	..	..	..	..	..	..	..	..	..
Bronchitis		..	..	1	..	1	1	1	1	3	7
Pneumonia (all forms)		..	..	..	..	..	3	4	13	5	25
Diarrhoea		..	..	..	..	..	..	2	1	..	3
Enteritis		..	..	2	1	3	7	5	3	2	20
Gastritis		..	1	1	..	2	2	..	..	..	4
Syphilis		..	..	..	..	..	..	..	..	..	..
Rickets		..	..	..	..	..	..	..	..	1	1
Suffocation, overlying		..	..	1	..	1	..	1	..	..	2
Injury at birth		..	..	..	..	..	..	..	..	..	..
Atelectasis		7	..	..	..	7	..	..	..	..	7
Congenital malformations		6	..	1	1	8	..	4	1	..	13
Premature birth		30	2	2	2	36	2	3	..	..	41
Atrophy, debility & marasmus		8	..	3	..	11	4	..	..	..	15
Other causes		..	..	..	..	..	1	1	2	..	4
Total		56	6	11	6	79	26	29	28	20	182

Net Births in the year :—		Net Deaths in the year :—	
Legitimate	1,874	Legitimate Infants	175
Illegitimate	89	Illegitimate Infants	7

TABLE 11.—DEATHS DURING 1933 OF INFANTS UNDER ONE YEAR: CAUSES AND WARD DISTRIBUTION.

Causes of Death.	WARDS.															Total.
	Shields.	Beacon.	St. Hilda.	Hadrian.	Holborn.	Laygate.	Victoria.	Bents.	Rekendyke.	Westoe.	Deans.	Tyne Dock.	Simonside.	West Park.	Harton.	
Causes—																
rtified	8	4	16	12	15	12	8	8	22	5	10	18	13	13	7	171
ncertified	......	2	......	......	......	2	3	1	......	......	......	2	......	1	......	11
pox	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
enpox	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
es	......	......	......	......	......	1	......	1	......	......	......	2	2	......	......	6
t fever	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
ping cough	......	......	......	4	1	......	......	......	3	......	......	1	1	......	1	11
heria and croup	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
pelas	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
culous meningitis	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	1
minal tuberculosis	......	......	......	......	2	......	......	......	......	......	......	......	......	......	......	2
tuberculous diseases	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	1
gitis (*not tuberculous*)	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
lsions	1	......	1	......	2	......	3	......	3	......	2	3	2	2	......	19
gitis	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
hitis	......	1	1	1	......	2	......	......	......	1	1	......	......	......	......	7
nonia (all forms)	......	1	3	2	3	1	2	1	4	2	......	3	......	3	......	25
hoea	......	......	......	......	......	......	1	......	1	......	......	1	......	......	......	3
itis	1	2	5	......	1	2	2	1	1	......	......	......	3	2	......	20
tis	......	......	......	......	......	1	......	......	......	......	1	1	......	......	1	4
is	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
ts	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	1
ation, overlying	......	......	1	......	......	......	......	1	......	......	......	......	......	......	......	2
at birth	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
tasis	......	......	1	......	......	2	......	......	......	......	......	3	......	1	......	7
nital malformations	1	......	1	......	1	3	1	1	3	......	......	1	......	......	1	13
ture birth	4	1	3	3	......	1	2	4	6	1	2	3	4	3	4	41
hy, debility & marasmus	1	1	......	2	3	1	......	......	......	1	3	1	......	2	......	15
causes	......	......	......	......	2	......	......	......	......	......	......	......	1	1	......	4
deaths under one year	8	6	16	12	15	14	11	9	22	5	10	20	13	14	7	182
er of Births*	82	105	117	111	123	158	156	96	177	84	165	203	152	141	105	1992
Mortality Rate*	98	57	137	108	122	89	71	94	124	60	61	99	86	99	67	93
Deaths at all ages†	62	108	86	123	101	94	104	88	116	98	110	151	109	110	89	1558

* The births dealt with in this table are (*a*) 1,560 live births notified under the Notification of Births Acts, and (*b*) 432 registered and not previously notified; including 17 births in Harton Hospital and other maternity homes among "non-residents" of the Borough. Elsewhere in this report the Registrar-General's figures of births registered during the calendar year have been used for the calculation of birth-rates.

† Includes 9 deaths in Hospitals among persons with no fixed abode.

NOTE:—The decrease in the births and deaths in Shields Ward in 1932 and 1933 is mainly due to the tranference of the population from that Ward to Tyne Dock, Simonside and West Park Wards in connection with housing clearance schemes.

TABLE 12.—SUMMARY OF METEOROLOGICAL OBSERVATIONS, 1933, taken at 9 a.m. daily at the Bents Park and Health Department, South Shields.

MONTH.	Barometer (corrected for elevation, temperature, etc.)	AIR TEMPERATURE.							HYGROMETER.			EARTH TEMPERATURE.		RAINFALL (in inches).				WIND.								
		Average.			Absolute.											Most in a day.		Direction at 9 a.m. Number of Days.								
		Maximum.	Minimum.	Mean.	Maximum.	Date.	Minimum.	Date.	Dry Bulb.	Wet Bulb.	Relative Humidity.	At 1 Foot Depth.	At 4 Feet Depth.	Total Fall.	No. of days rain fell .01″ or more	Amount.	Date.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
January	30.064	42.2	33.0	37.7	55.3	2	22.1	23	38.0	36.7	88	36.6	41.9	1.67	15	0.47	16	2	..	..	5	5	10	8	1	..
February ..	29.885	46.5	36.7	41.7	57.0	7	28.5	22	41.8	39.2	78	37.8	40.3	2.88	18	0.71	26	3	2	1	3	2	3	9	5	..
March	29.859	52.6	39.6	45.9	62.2	28	32.9	12	45.6	42.8	78	41.9	41.7	1.06	11	0.34	3	1	..	..	4	10	8	5	3	..
April	30.032	54.1	41.6	48.1	65.2	8	31.3	21	48.7	44.8	72	47.8	45.9	1.08	15	0.22	25	2	3	2	4	3	1	6	9	..
May	29.962	55.1	46.0	50.9	67.9	19	39.5	14	51.5	48.8	82	53.5	50.6	1.15	18	0.16	16& 24	4	3	8	6	1	1	5	3	..
June	29.857	63.5	50.2	57.7	78.1	5	43.6	27	59.4	55.3	77	61.1	56.7	1.95	12	0.62	17	12	2	2	5	4	2	2	1	..
July	29.948	70.3	56.3	64.0	77.7	26	51.6	30	65.5	59.8	71	65.6	61.0	1.77	15	0.54	19	1	..	1	3	5	6	10	5	..
August	29.957	70.4	55.4	63.3	82.3	27	47.5	22	64.0	59.1	74	64.0	61.9	1.46	15	0.67	28	1	..	1	4	3	6	10	6	..
September ..	30.085	62.4	52.1	57.7	73.5	3	43.3	14	58.7	56.4	86	59.3	60.0	1.92	13	0.77	25	4	12	1	3	1	3	4	2	..
October	29.850	56.0	45.1	50.9	62.5	8	33.8	27	51.5	49.3	85	51.0	55.5	3.79	16	1.13	22	9	3	2	..	3	6	8	..	..
November ..	29.946	48.7	38.9	44.1	59.9	6	33.8	13	44.6	43.3	89	43.3	48.7	5.07	24	1.05	2	3	1	2	8	1	1	3	11	..
December ..	30.198	42.6	35.3	39.2	48.4	22	29.6	30	39.6	38.3	89	38.9	43.8	1.74	23	0.21	15	..	2	5	3	2	8	6	5	..
AVERAGES ..	29.970	55.3	44.2	50.1	..	..	..	..	50.7	47.8	81	50.1	50.6	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	..	..	..	..	..	..	..	25.54	195	..	..	42	28	25	48	40	55	76	51	..